

Epidemiologic Profile for HIV/AIDS Prevention and Care Planning in Vermont



Vermont Department of Health
Division of Health Surveillance

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EXECUTIVE SUMMARY

At the end of 2002, nearly 400 persons were known to be living in Vermont with HIV or AIDS. The Vermont HIV/AIDS registry indicated that more than half were living with AIDS, while less were living with HIV that had not progressed to AIDS. The actual number of persons in Vermont with HIV/AIDS, including those who have not yet been diagnosed, has been estimated by the Centers for Disease Control and Prevention to lie between 590 and 660. Chittenden County, where about a quarter of the state's population resides, was the county of residence reported by nearly half of the persons living in Vermont with HIV/AIDS. Chittenden County had approximately 115 persons per 100,000 population living with HIV/AIDS, while most other counties had prevalence rates between 25 and 50 per 100,000.

The majority of those living with HIV and AIDS in Vermont are among the white, non-Hispanic population, a population which comprises the majority of the state's population. Blacks represented 10 percent of the population living with HIV/AIDS at the end of 2002, and 15 percent of newly diagnosed AIDS cases during the 3-year period 2000-2002. Less than 1 percent of the state's population is black. While there was an overall decline in AIDS cases from 1997-1999 to 2000-2002, newly diagnosed AIDS cases among Hispanic men and women increased. The female proportion of those newly diagnosed with AIDS nearly doubled from 1997-1999 to 2000-2002. For the period 2000-2002, persons between the ages of 30 and 49 represented well over half of newly diagnosed AIDS cases; 77 percent of those living in Vermont with HIV/AIDS at the end of 2002 were within this age group.

White men who reported having had sex with men continue to be the group most affected by the epidemic in Vermont. The proportion of cases attributed to injection drug use has declined, while the proportion reporting heterosexual contact with a person or persons with, or at increased risk for, HIV infection has increased. More than half of persons with new AIDS diagnoses during 2000-2002 reporting heterosexual contact as a risk factor were female. The predominant transmission mode reported among females newly diagnosed with AIDS during 2000-2002 was heterosexual contact, while for 1997-1999, most females reported injection drug use as mode of exposure. At the end of 2002, roughly 75 percent of adults living in Vermont with HIV/AIDS reported men who have sex with men and/or injection drug use as transmission mode.

During the period 1997-2001, HIV disease was the sixth leading underlying cause of death among persons 25 to 44 years of age. For the same period, over 90 percent of those who died of a cause related to HIV were men. The death rate for this period among those who died of a cause related to HIV was significantly higher in blacks than the rate among whites.

The 2001 Vermont HIV Testing Survey, a behavioral survey of high-risk populations, found that among men in gay bars, almost two-thirds of men interviewed had four or more sexual partners in the past 12 months. Seventy-eight percent reported having at least one sexual partner other than their main sexual partners (non-primary sexual partners) in the past year. An estimated 40 percent of men who have sex with men reporting having sex with non-primary partners did not use condoms during receptive anal intercourse, and 46 percent did not use condoms during insertive anal intercourse. The respective proportions of men who have sex with men who

reported not using condoms with their main sexual partners (primary sexual partners) were 90 percent and 76 percent.

In 2001, the Vermont Youth Risk Behavior Survey found that more than half of 8th-12th grade males who reported having had sex with males also reported having sex with three or more people in the past three months. About 70 percent reported not having used a condom the last time they had sex. This proportion is an increase from 1999 and 1997 rates. Also in 2001, among 8th-12th grade males who reported having had sex with males, more than half reported having drunk alcohol and/or used drugs the last time they had sexual intercourse. Reported heroin use among this group declined from 1999 to 2001, however, from 51 percent to 35 percent.

In 1999 and 2000, the National Household Survey on Drug Abuse found that, in Vermont, roughly 9 percent of persons aged 12 years and older reported having used an illicit drug at least once during the past month. Past month drug use was highest among 18-25 year old persons (27 percent). Recent cocaine use was highest among the age group 26 and older. The 2001 Vermont Youth Risk Behavior Survey found that 3 percent of 8th-12th grade students reported having ever injected illicit drugs. The same proportion reported having used heroin at least once.

The 2001 Vermont HIV Testing Survey indicated that 39 percent of injection drug users reported sharing needles in the past 12 months, and 34 percent reported sharing equipment. According to data obtained through the Vermont Department of Health Division of Alcohol and Drug Abuse Programs, the number of heroin treatment admissions in Vermont has increased each fiscal year since 1999. Of the 833 persons admitted for heroin treatment during fiscal year 2002, 45 percent were persons aged 19 to 24 years, while men represented 56 percent of admissions.

Data from the Vermont Behavioral Risk Factor Surveillance System and Vermont Youth Risk Behavior Survey were examined to provide information on risk behavior among the general population. According to the 2001 Vermont Behavioral Risk Factor Surveillance System, women had lower rates of barrier use (e.g., condom) when they last had sex than men: 62 percent with a casual partner and 15 percent with a main partner compared to 71 percent and 20 percent, respectively, for men. In 2001, the Vermont Youth Risk Behavior Survey found that, among 8th-12th grade students, 68 percent of males reported using a condom at last sexual intercourse, while 59 percent of females reported this behavior.

The Vermont Behavioral Risk Factor Surveillance System also provides information on HIV testing behavior in the general population. Among participants in the 2001 Vermont Behavioral Risk Factor Surveillance System, 43 percent reported ever having had at least one HIV test. The Vermont HIV Testing Survey, which provides information on HIV testing behavior in high-risk populations, indicated that, among participants in the 2001 Vermont HIV Testing Survey, 90 percent of men who have sex with men and 69 percent of injection drug users had ever been tested for HIV; most men who have sex with men received testing at Public Health Clinics, while most injection drug users received testing at drug treatment centers. There was an increase in tests performed within the Vermont Counseling, Testing, and Referral system over the period 1998-2002 of greater than 100 percent (910 HIV-1 tests in 1998 to 2,475 in 2002). The reason for this increase is most likely due to the introduction of anonymous oral testing in 2001. Since 2000, within the Vermont Counseling, Testing, and Referral system, there has been a steady increase in the percent of persons with a positive result after being tested for the first time.

During fiscal year 2002, there were 387 individuals who received Ryan White Title II services in Vermont. Approximately two thirds of those received services at Comprehensive Care Clinics, while the remainder received services at AIDS Service Organizations. Based on non-duplicated service utilization counts, 75 percent of Ryan White Title II clients were men. Almost 60 percent were persons 25-44 years old, and approximately 35 percent were persons 45-64 years old. The majority (80%) were white while 10 percent of clients were African-American. Of HIV-positive clients, about half were men who reported having had sex with men and about one quarter reported heterosexual transmission. There are currently no data available on HIV medical care in Vermont, or on the characteristics of persons who know that they are HIV-positive but who are not receiving HIV primary medical care.

SECTION 1

Core Epidemiologic Questions

Question 1: What are the Sociodemographic Characteristics of the General Population in Vermont?

Question 2: What is the Scope of the HIV/AIDS Epidemic in Vermont?

Question 3: What are the Indicators of Risk for HIV/AIDS in Vermont?

Question 1

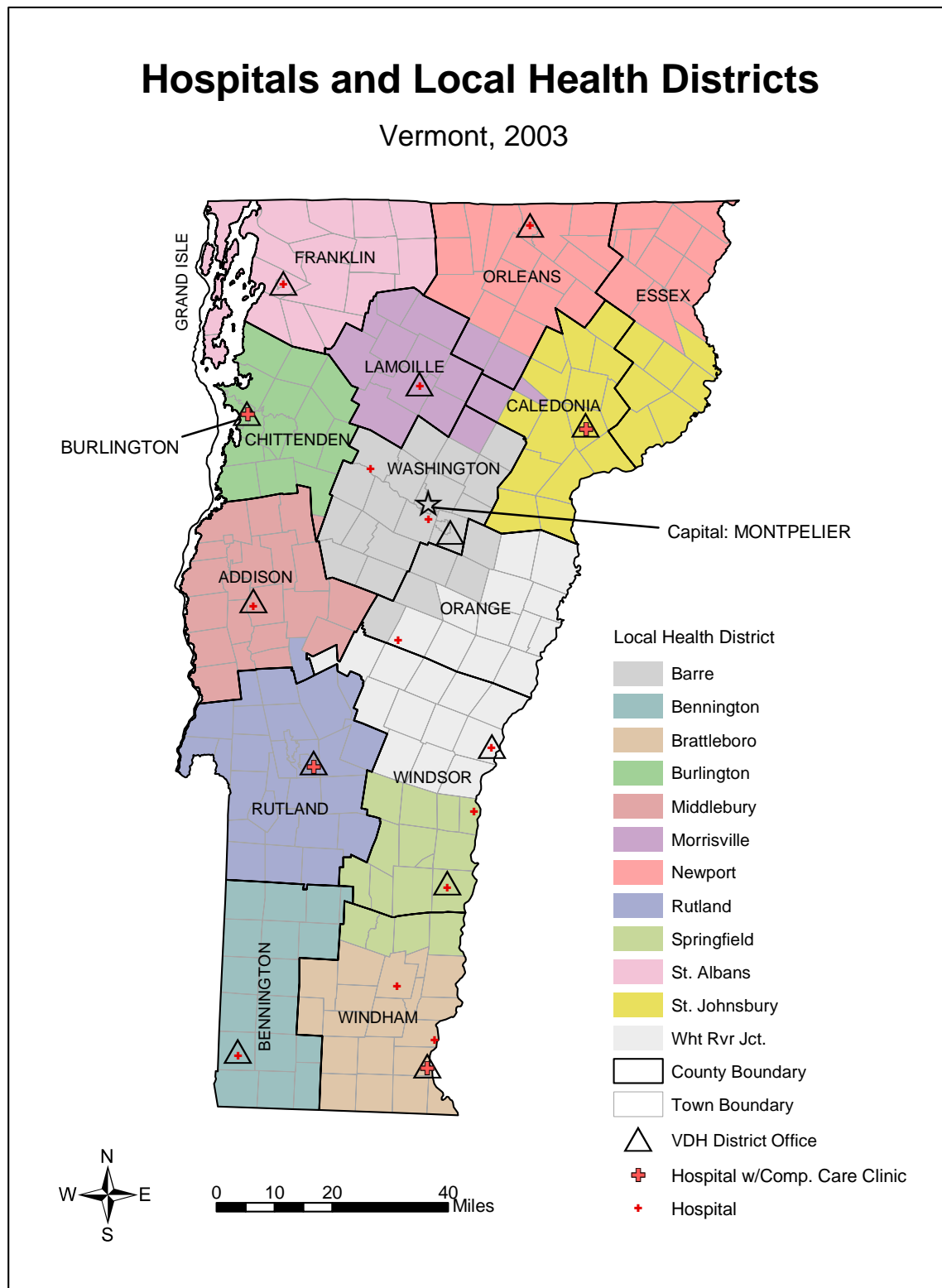
What are the Sociodemographic Characteristics of the General Population in Vermont?

Summary

Population: The estimated 2002 total population for the state of Vermont was 615,611 persons; only one other state has a population smaller than Vermont's. The state is divided into 14 counties with populations ranging from 6,482 persons (Essex County in northeastern Vermont) to 148,273 persons (Chittenden County in northwestern Vermont). Burlington, the state's largest city, has a population of 38,885. Vermont has only one Metropolitan Statistical Area that includes parts of Chittenden, Franklin, and Grand Isle counties and has a population of approximately 170,000.

The state covers an area of 9,614 square miles. The population density per square mile of land area for the entire state is 65.8, although the population density of the most populous county is 271.9. Vermont is a rural state, and 62 percent of its population resides in rural areas. The Green Mountains bisect the state from north to south. The capital is Montpelier, in Washington County (Figure 1).

Figure 1.



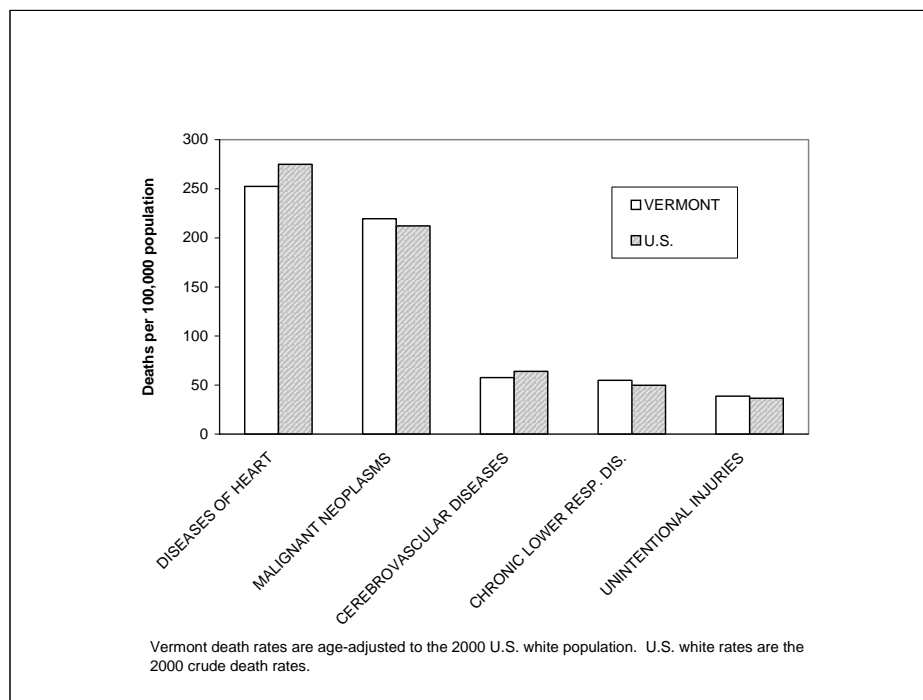
Demographic Composition: According to the 2000 Census, the racial and ethnic composition of the state was estimated to be 96.8 percent white, 0.5 percent African-American, 0.4 percent American Indian and Alaska Native, and 0.9 percent Asian. Individuals of Hispanic or Latino origin were estimated to make up 0.9 percent of the state's population. Among individuals age 5 years and older, only 5.9 percent spoke a language other than English at home.

Age and Gender: In 2002, the median age for Vermont residents was 38.1 years. Approximately 27 percent of the population was younger than 20 years of age, while 12.5 percent of the population was age 65 or older. Females made up 51 percent of Vermont's total population in 2002.

Poverty, Income, and Education: In 2000, the median household income in Vermont was \$40,856. Census data indicate that 6.3 percent of families and 9.4 percent of individuals had incomes that fell below the federally defined poverty level. The 2000 unemployment rate was 2.9 percent statewide. Among individuals age 25 years and older, 86.4 percent reported educational attainment of high school graduate or higher and 29.4 percent achieved a bachelor's degree or higher. These rates are above the national rates of 80.4 percent and 24.4 percent, respectively.

Leading Causes of Death: The 2001 Vermont leading causes of death were compared with the U.S. white rate because 99.6 percent of Vermont residents who died in 2001 were white (Figure 2). Heart disease and cancer accounted for 51.5 percent of Vermont deaths in 2001. Cerebrovascular disease has been the third leading cause of death in Vermont for the past 40 years. The fourth through tenth leading causes of death in Vermont in 2001, respectively, were chronic lower respiratory disease, accidents, diabetes, Alzheimer's disease, influenza and pneumonia, nephritis/nephrosis, and suicide.

Figure 2. Five Leading Causes of Death Among Persons Reporting White as Race, Vermont and U.S., 2001



Public Health and Health Care Infrastructure: The Vermont Department of Health has a central office in Burlington and 12 district offices that together serve every area of the state. There are no other local public health departments in Vermont. The district offices provide the essential health promotion and disease prevention services necessary to an effective public health system. Working in partnership with community health care providers and organizations, staff in these offices help to define health problems in the community and work toward solutions. Public health professionals in the district offices include administrators, public health nurses, nutritionists, health outreach specialists and administrative support workers. Public health programs carried out by the district office staff include Healthy Babies, WIC (Special Supplemental Nutrition Program for Women, Infants and Children), EPSDT (Early Periodic Screening, Diagnosis and Treatment), infectious disease prevention and control, lead poisoning prevention and screening, refugee health, and the town health officer program.

Infectious Disease Epidemiology and the HIV/AIDS Program are located within the Division of Health Surveillance in the central office. The HIV Surveillance Coordinator position is located in Infectious Disease Epidemiology.

Vermont has one academic medical center (Fletcher Allen Health Care), which is located in Burlington and is affiliated with the University of Vermont's Colleges of Medicine and Nursing. This is a 615-bed tertiary care facility that provides a full range of medical services, including a Level 1 Trauma Center. There are 13 other community hospitals and two mental health hospitals in Vermont, with licensed bed capacities ranging from 19 to 188. The Brattleboro Retreat is a regional specialty psychiatric hospital and addictions treatment center, providing a full range of diagnostic, therapeutic and rehabilitation services for individuals of all ages and their families. The Vermont State Hospital is a psychiatric hospital in Waterbury, Vermont. In addition, the Veterans Administration Medical Center in White River Junction, Vermont serves veterans in Vermont, New Hampshire, and Canada. The average acute care daily census in all Vermont hospitals combined is 641. Vermonters also receive care at the Dartmouth-Hitchcock Medical Center just over the border in Lebanon, New Hampshire and at the Albany Medical Center in Albany, New York (Figure 3). Figure 4 describes the geographic distribution of prevention- and services-oriented AIDS Service Organizations (ASO) available to Vermonters. ASOs in VT provide case-management and related services to persons who are HIV-positive (and affected persons), as well as coordinate prevention-oriented programs focused on specific populations.

Figure 3.

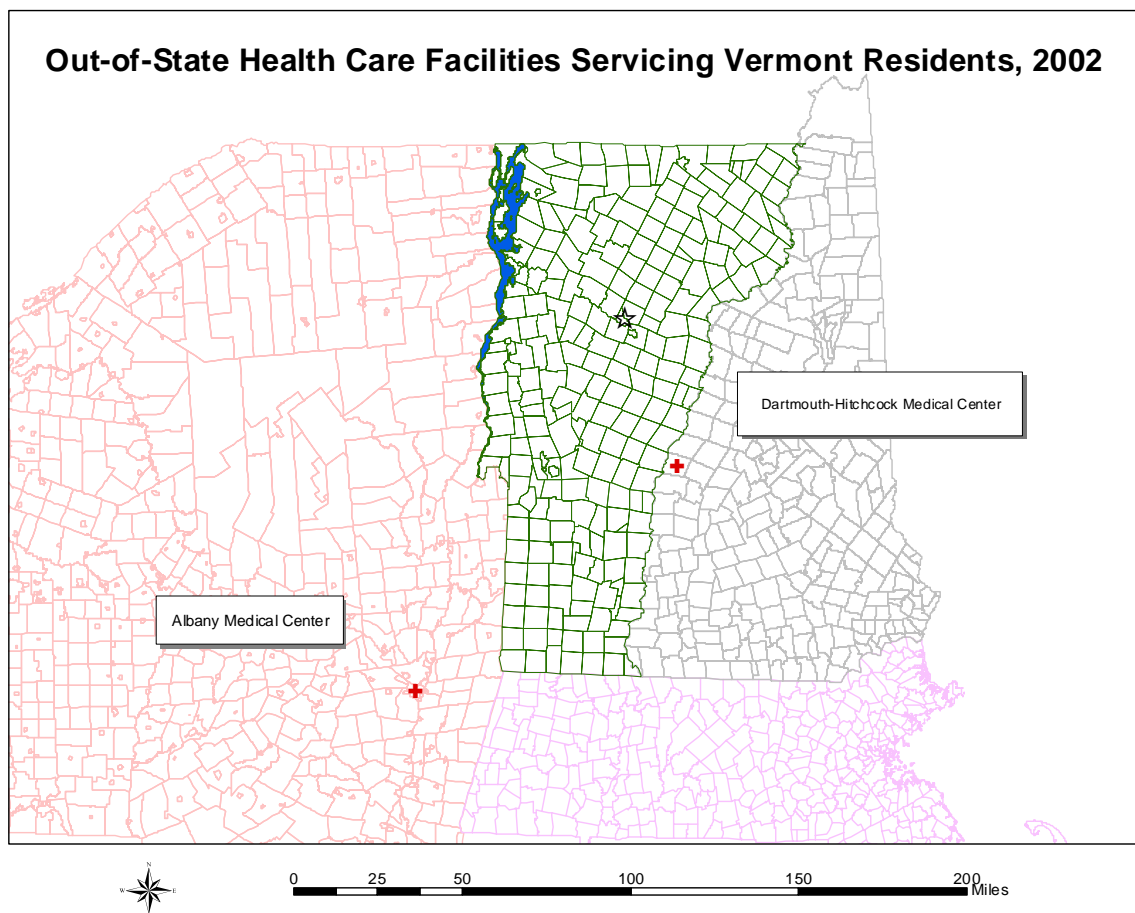
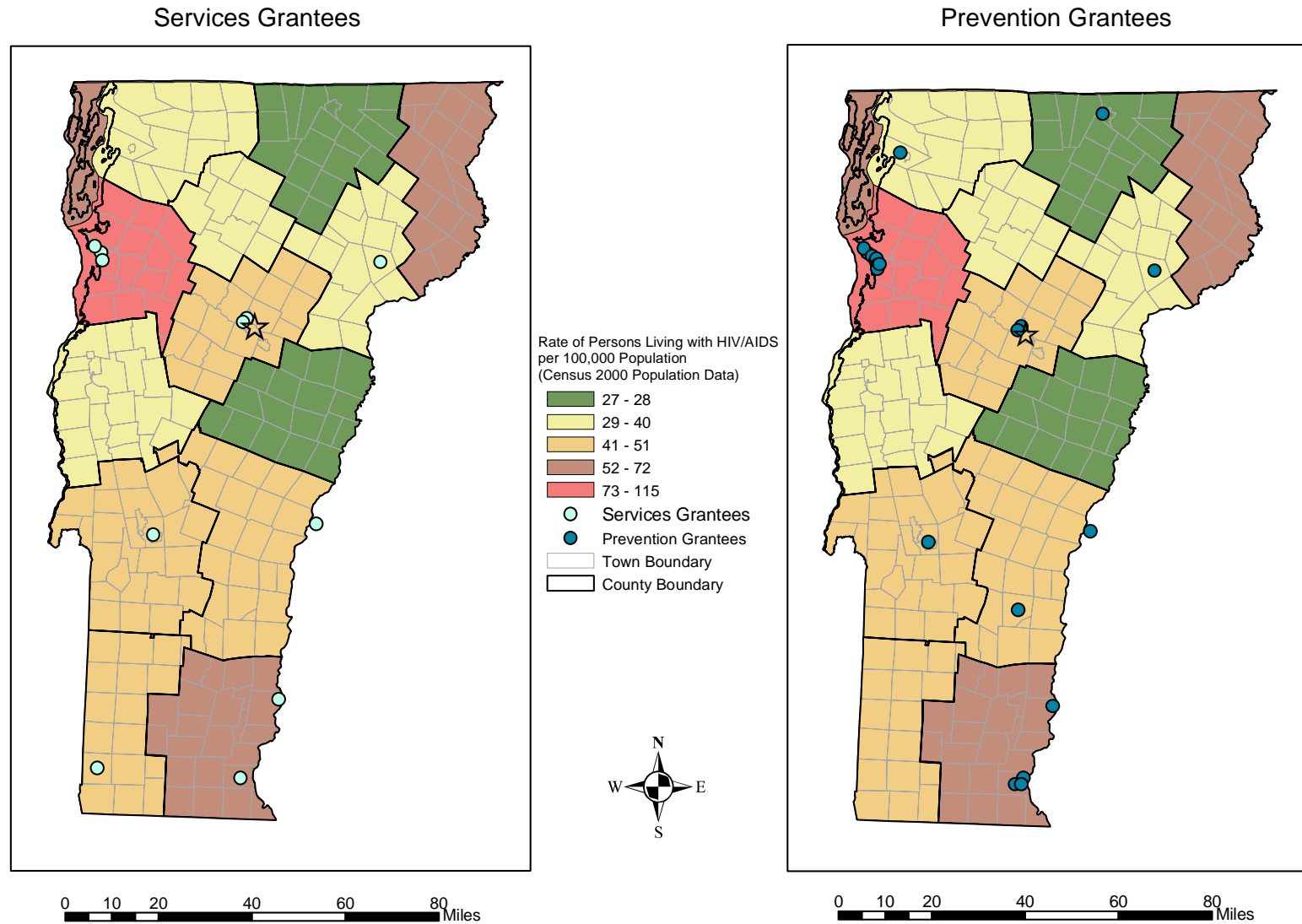


Figure 4.

HIV/AIDS Prevalence Rates and AIDS Service Organizations

Vermont, 2002



Comprehensive Care Clinics: Vermont has developed a model of HIV care that is centered on hospital-based HIV specialty clinics¹. The model was designed to remove many of the barriers to health care delivery for the HIV-infected patient population in Vermont, including the complexity of the rapidly changing field of HIV specialty care, inexperienced rural physicians, long travel distances to receive expert care, Vermont's limited highway system and minimal public transportation, the lack of psychosocial support systems, and concerns about confidentiality. Four hospital-based HIV specialty clinics (called Comprehensive Care Clinics) are located in the northeast, northwest, central, and southern parts of the state (Figure 1). Hospitals were selected as clinic sites because of their location in population centers and to take advantage of existing hospital infrastructure including scheduling, medical records, billing, and laboratory and radiology services. The HIV clinics were blended into other specialty clinics within the hospitals to assure confidentiality. Each clinic team is composed of a nurse practitioner, a hospital-based social worker, a client consultant, a community-based social worker from the regional AIDS Service Organization, and an infectious disease specialist from the University of Vermont.

Access to Health Care: The Vermont Department of Prevention, Assistance, Transition, and Health Access has several programs that provide access to health care and prescription medications for Vermonters. Medicaid covers most medical care and services for eligible seniors aged 65 or older, persons who are blind or disabled, children, pregnant women and parents. Dr. Dynasaur is a program that offers health care insurance with no deductibles or co-pays for children and teenagers (up to age 18) and pregnant women. The Vermont Health Access Plan (VHAP) is an insurance program for adults that covers a wide range of services, including hospital care and doctor visits. VHAP-Pharmacy and VScript provide assistance with prescription medication costs. The Mental Health Parity Act passed by the Vermont legislature in 1997 requires that insurance companies provide the same kind of coverage for mental health and substance abuse treatment that they provide for other physical conditions.

¹ Grace CJ, Soons KR, Kutzko D, Alston WK, Ramundo M. Service delivery for patients with HIV in a rural state: the Vermont model. *AIDS Patient Care and STDs* 1999;13(11):659-666

According to the Vermont Department of Banking, Insurance, Securities, and Health Care Administration, this proportion was 90 percent in 2002. This was above the national rate of 82.1 percent, but fell short of the *Healthy People 2010* target of 100 percent coverage.

The Vermont Health Care Quality Report for 2001 provided selected measures of health care quality and utilization. In 2000, 90 percent of Vermont children ages 1 to 11 years had seen a medical professional in an office, clinic, or at home. The percent of adults who had seen a medical professional in an office, clinic, nursing home, or at home in the past three years was 94 percent for ages 20-44, 96 percent for ages 45-64, and 97 percent for ages 65 and older.

Selected Health Indicators: According to the CDC, Vermont's 1999 AIDS case rate per 100,000 population was 4.2, considerably lower than the national rate of 19.5. The Henry J. Kaiser Family Foundation's State Health Facts Online ranked Vermont 47th of the 50 states and the District of Columbia in the cumulative number of AIDS cases reported through December 2001. Vermont also ranked 47th in the estimated number of persons living with AIDS at the end of 2001 and the cumulative reported deaths among persons with AIDS through December 2000. Only Idaho, Alaska, Montana, Wyoming, and North Dakota had fewer new AIDS cases reported than Vermont in 2001.

Healthy Vermonters 2010 includes objectives related to HIV and sexually transmitted diseases. One objective is to increase the percentage of sexually active adults ages 18 to 49 at risk for HIV and sexually transmitted diseases who use condoms from 47 percent in 1999 to a goal of 75 percent. A second objective is to increase the percentage of adolescents who abstain from sexual intercourse or use condoms if currently sexually active from 85 percent in 1999 to a goal of 95 percent.

Demographics

Table 1. Vermont Adult Population by Race, Ethnicity, and Age Group, 2000

Race or Ethnicity	18-24		25-34		35-44		45-64		65+	
	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>
Single Race										
White	26,275	27,781	36,142	35,054	50,485	48,681	74,205	73,120	44,791	31,709
Black	293	307	137	198	192	298	131	227	51	41
American Indian or Alaskan Native	109	120	145	177	346	142	340	378	35	40
Asian	414	457	468	469	421	240	421	263	82	54
Native Hawaiian or Pacific Islander	≤3	11	11	17	15	25	20	9	7	5
More than one race	518	459	496	507	624	545	782	619	238	208
Other/Unknown	146	153	121	113	75	53	78	57	17	17
Hispanic or Latino	510	530	369	348	364	272	450	477	166	126

Table 2. Vermont Adult Population by County, Gender, and Age Group, 2000

County	18-24		25-34		35-44		45-64		65+	
	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>
Addison	2215	2295	2078	1895	2891	2830	4340	4416	2310	1755
Bennington	1530	1316	2021	1883	2991	2819	4906	4603	3581	2586
Caledonia	1148	1457	1633	1636	2330	2204	3775	3738	2524	1748
Chittenden	9875	9356	10610	10595	13124	12627	16380	15711	8284	5496
Essex	214	206	368	360	505	525	789	858	539	442
Franklin	1534	1648	3163	3036	4010	4060	5046	5157	2918	2086
Grand Isle	176	213	398	350	609	627	978	988	461	389
Lamoille	1127	1188	1489	1578	1987	1894	2824	2863	1488	1150
Orange	944	1262	1557	1513	2542	2344	3606	3617	2033	1579
Orleans	899	967	1457	1566	2008	2021	3408	3391	2312	1640
Rutland	2545	2742	3710	3496	5248	5079	8256	8105	5585	3895
Washington	2208	2974	3614	3383	4942	4724	7625	7470	4490	2973
Windham	1499	1661	2595	2381	3900	3553	6056	5986	3572	2601
Windsor	1597	1790	3128	3074	4956	4539	8065	7795	5172	3901
VERMONT	27,511	29,075	37,821	36,746	52,043	49,846	76,054	74,698	45,269	32,241

Question 2

What is the Scope of the HIV/AIDS Epidemic in Vermont?

AIDS reporting began in Vermont in 1982, while HIV infection has been reportable for approximately three years (March 2000). Because cases of HIV infection have been reported to the Vermont Department of Health for only a short period of time, the history of the HIV/AIDS epidemic in Vermont is described in this section based primarily on AIDS data. A description of HIV in Vermont based on data received over this short period will provide a baseline for the future. Analyses of HIV data that include multiple years will be incorporated into future updates of the Epidemiologic Profile. Due to small overall numbers in Vermont, three-year periods are used in many of the following analyses.

HIGHLIGHTS

- Based on the number of AIDS cases reported to the Vermont Department of Health, and CDC's estimate of 323,000 persons living in the U.S. with AIDS and 850,000 to 950,000 living in the U.S. with HIV, it is estimated that between 590 and 660 persons are living in Vermont with HIV/AIDS.
- Forty-three percent (43%) of persons living with HIV/AIDS at the end of 2002 lived in Chittenden County, the most populous county in Vermont. Chittenden County had approximately 115 persons per 100,000 population living with HIV/AIDS, while most other counties had prevalence rates between 25 and 50 per 100,000.
- Blacks represented 10 percent of the population living with HIV/AIDS at the end of 2002, and 15 percent of newly diagnosed AIDS cases from 2000-2002, even though less than 1 percent of the state's population is black.
- Comparing 2000-2002 to 1997-1999, there was an overall decline in newly diagnosed AIDS cases. Although this decline is reflected in rates for Whites and Blacks, it was not seen in Hispanic men and women, as the rate nearly doubled.
- For the period 2000-2002, persons between the ages of 30 and 49 represented well over half of newly diagnosed AIDS cases. At the end of 2002, 77 percent of persons living in Vermont with AIDS were between the ages of 30 and 49.
- The percentage of persons newly diagnosed with AIDS for 2000-2002 who were female roughly doubled from the 1997-1999 time period. Females between the ages of 30 and 49 represented 11 percent of newly diagnosed AIDS cases from 2000-2002, while from 1997 - 1999, the same female age group represented 5 percent of newly diagnosed AIDS cases.

- More than half of persons with new AIDS diagnoses during 2000-2002 reporting heterosexual contact as a risk factor were female. More than half of all females with new AIDS diagnoses reported heterosexual contact as a potential transmission mode for 2000-2002, while for 1997-1999, most females reported injection drug use (IDU) as mode of exposure.
- White men who reported having had sex with men (MSM) continue to be the group most affected by the epidemic in Vermont. The proportion of cases attributed to IDU has declined, while the proportion of cases reporting heterosexual contact with a person or persons with or at increased risk for HIV infection has increased.
- Over the 5-year period 1997-2001, men who died of a cause related to HIV had significantly higher death rates than women who died of a cause related to HIV (93% and 7%, respectively). For the same period, of men and women who died of a cause related to HIV, the death rate among blacks was significantly higher than the rate among whites.
- The death rate among persons within the 35-44 year age group who died of a cause related to HIV for 1997-2001 was at least double the rate of other age groups. For 1997-2001, HIV disease was the 6th leading underlying cause of death in the 25 to 44 year age group.

HIV/AIDS in Vermont

Since the implementation of HIV case reporting in March 2000, there has been a statewide effort by health care providers to report all new and prevalent HIV cases. At the end of 2002, 168 persons were reported to be living with HIV in Vermont. This can be considered the minimum number of persons estimated to be living in Vermont with HIV who have not developed AIDS. The estimate does not include persons who are infected with HIV and have not yet been tested, as well as those who have only been tested anonymously. Also, the estimate only takes into account persons who first tested positive for HIV while residing in Vermont.

Once HIV case reporting had been in place in Vermont for approximately one year, information regarding the characteristics of persons living in Vermont with HIV/AIDS has routinely been sent to individuals and groups involved with care and prevention services planning, as well as other interested parties. Table 3 is an example of this report, and describes the characteristics of the 393 persons living in Vermont with HIV, as well as HIV disease that has progressed to AIDS, at the end of 2002.

CDC also provides a method to HIV/AIDS surveillance programs by which an estimated range of persons living with HIV and AIDS can be calculated. The following estimate is derived by estimating the proportion of U.S. AIDS cases living in Vermont and using this estimate to determine an approximate range of persons living in Vermont with HIV. The proportion of U.S. AIDS cases living in Vermont was calculated based on 225 AIDS cases reported to the Vermont Department of Health's HIV/AIDS Surveillance Program through the end of 2002. Using CDC's estimate of 323,000 persons living in the U.S. with AIDS at the end of 2000, the proportion of U.S. AIDS cases living in Vermont was approximately 0.07 percent. Applying this proportion to the upper and lower bounds of the approximate range of persons living in the U.S. with HIV/AIDS in 2000 (850,000 to 950,000), it is estimated that between 590 and 660 persons are living in Vermont with HIV/AIDS.

The following map depicts how the epidemic is affecting Vermont geographically (Figure 5). At the end of 2002, one county had greater than 100 persons living with HIV/AIDS per 100,000 persons in the county. Most counties had prevalence rates between 25 and 50. Chittenden County, with 24 percent of the state's population, had the highest concentration of persons living with HIV/AIDS compared to other counties; 43 percent of persons living with HIV/AIDS reported Chittenden as their county of residence².

² All case rates are based on population data from the U.S. Bureau of the Census, Census 2000

Table 3. Vermont Quarterly HIV/AIDS Report

Exposure Category	Persons living with HIV ^{1,2}		Persons living with AIDS			Persons living with HIV/AIDS	Cumulative AIDS cases		
	Vermont ³		Vermont ³		US ⁶	Vermont ³	Vermont ³		US ⁹
	number	percent	number	percent	percent	percent	number	percent	percent
Gender									
Male	131	78%	192	85%	79%	82%	384	88%	82%
Female	37	22%	33	15%	21%	18%	51	12%	18%
Total	168	100%	225	100%	100%	100%	435	100%	100%
Age									
<13	≤3 ⁴	<1%	≤3	<1%	N/A ⁷	<1%	5	1%	1%
13-19	5	3%	≤3	1%		2%	5	1%	1%
20-29	52	31%	27	12%		21%	57	13%	16%
30-39	61	36%	107	48%		43%	204	47%	44%
40-49	44	26%	65	29%		28%	127	29%	27%
50+	5	3%	22	10%		7%	37	9%	11%
Total	168	100%	225	100%		100%	435	100%	100%
Race/Ethnicity									
White, Not Hispanic	146	87%	190	84%	37%	85%	377	87%	42%
African American, Not Hispanic	16	10%	24	11%	42%	10%	37	9%	38%
Hispanic	4	2%	10	4%	20%	4%	19	4%	18%
Asian/Pacific Islander	≤3	<1%	≤3	<1%	1%	<1%	≤3	<1%	1%
American Indian/Alaskan Native	≤3	<1%	≤3	<1%	<1%	<1%	≤3	<1%	<1%
Total	168 ⁵	100%	225	100%	100%	100%	435	100%	100%
Mode of Exposure									
Adult									
Men who have sex with men (MSM)	94	56%	118	53%	45%	54%	253	59%	46%
Injecting drug use (IDU)	23	14%	39	18%	27%	16%	74	17%	25%
MSM/IDU	7	4%	14	6%	6%	5%	25	6%	6%
Heterosexual	20	12%	26	12%	20%	12%	36	8%	11%
Hemophilia/Coagulation disorder	≤3	2%	6	3%		2%	11	3%	1%
Receipt of blood transfusion or tissue	≤3	<1%	5	2%	2% ¹⁰	2%	9	2%	1%
Other/risk not reported or identified	19	11%	14	6%		8%	20	5%	10%
Total	167	100%	222	100%	100%	100%	428	100%	100%
Pediatric (<13 yrs)									
Mother with/at risk for HIV infection	≤3	<1%	≤3	33%	N/A ⁸	25%	4	57%	91%
Receipt of blood transfusion or tissue	≤3	<1%	≤3	33%		25%	≤3	14%	4%
Hemophilia/Coagulation disorder	≤3	<1%	≤3	33%		25%	≤3	14%	3%
Other/risk not reported or identified	≤3	100%	≤3	<1%		25%	≤3	14%	2%
Total	≤3	100%	≤3	100%		100%	7	100%	100%

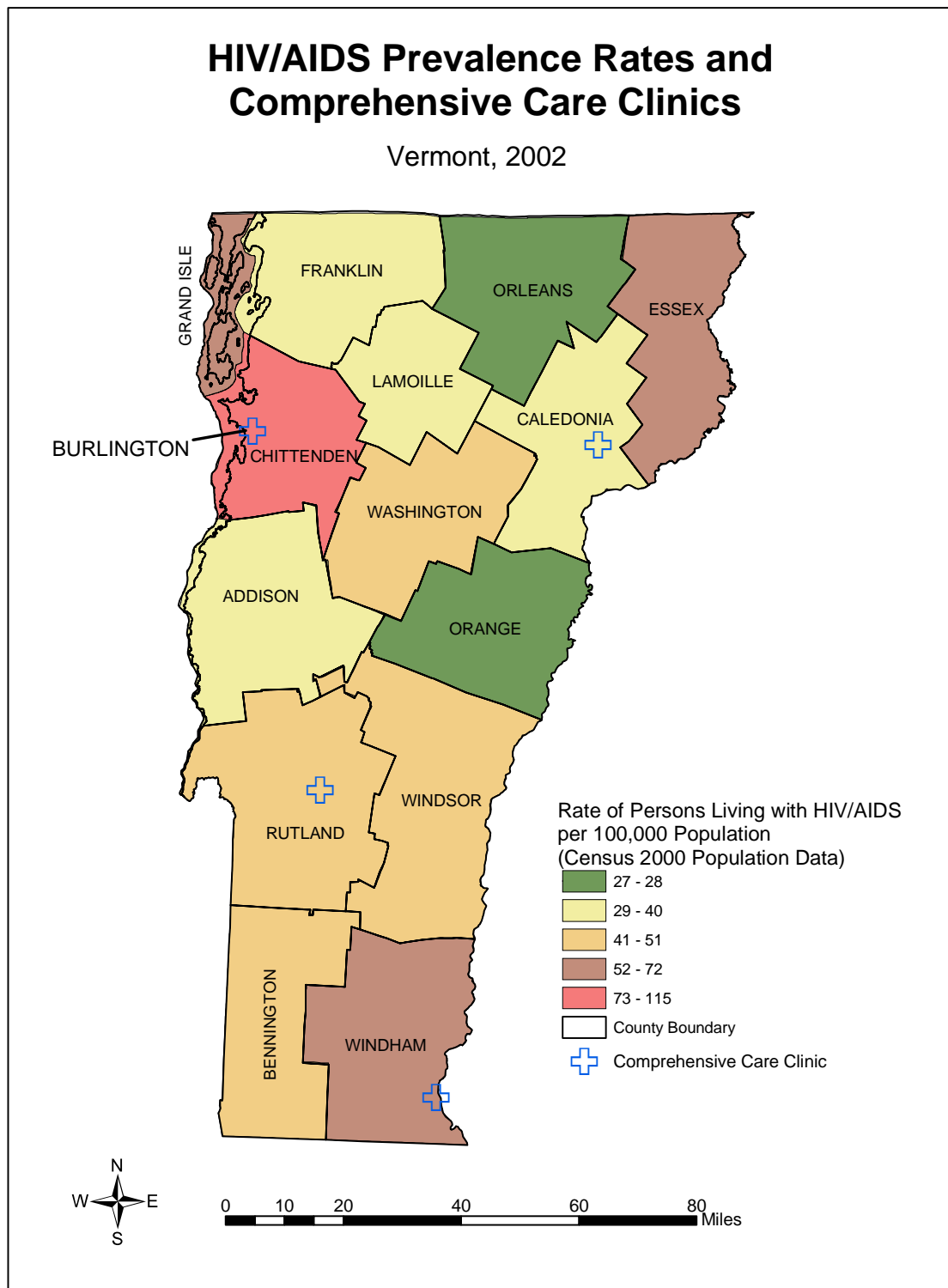
Notes

1. Includes only persons reported with HIV infection who have not developed AIDS.
2. A total of 175 cases of HIV infection have been reported to the Vermont Department of Health. Of these, 168 are believed to be living.
3. Vermont data include only those people who were residents of Vermont at the time of initial diagnosis.
4. The HIV/AIDS Surveillance Program does not typically release data with values ≤3.
5. Race/Ethnicity is unknown for one individual living with HIV.

6. Sources of US Data: CDC. HIV/AIDS Surveillance Supplemental Report, 2001. 7(No.1), 2001 and CDC. HIV/AIDS Surveillance Report, 2001. 13(No.2), 2001.
7. National data are available for different age categories and are not directly comparable.
8. National pediatric data among persons living with AIDS, categorized by mode of exposure, are not currently available.
9. Source of US Data: CDC. HIV/AIDS Surveillance Report, 2001. 13(No.2), 2001.
10. These exposure categories are all included in the category "Other" in the national data.

VERMONT AIDS HOTLINE 1-800-882-2437 (VOICE) 1-800-319-3141 (TTY)

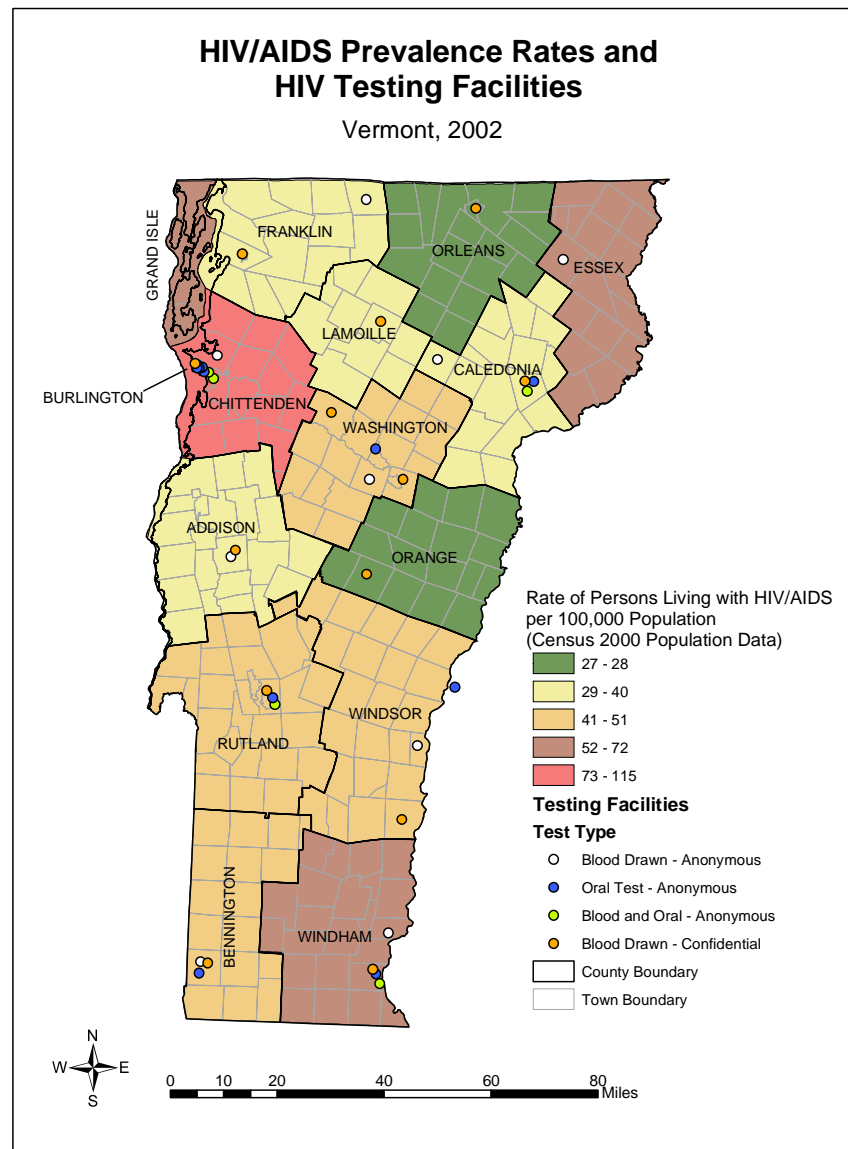
Figure 5.



HIV Counseling, Testing, and Referral in Vermont

The State of Vermont's HIV Counseling, Testing, and Referral system includes a total of 42 testing sites located in 21 towns throughout the state (Figure 6). Twenty-seven of these sites offer a combination of anonymous and confidential blood serum testing while the remaining 15 locations offer anonymous oral testing. Of these 42 locations, 15 are AIDS Service Organizations, 13 are family planning organizations, and the remaining 14 sites are a combination of private medical offices, hospitals, and publicly funded health clinics. In addition to these sites, many AIDS Service Organizations have the capacity to perform HIV Counseling, Testing, and Referral services in the field. Once collected and processed within the Health Department, HIV Counseling, Testing, and Referral data provide information on persons who receive tests at these sites, such as demographic and behavioral characteristics.

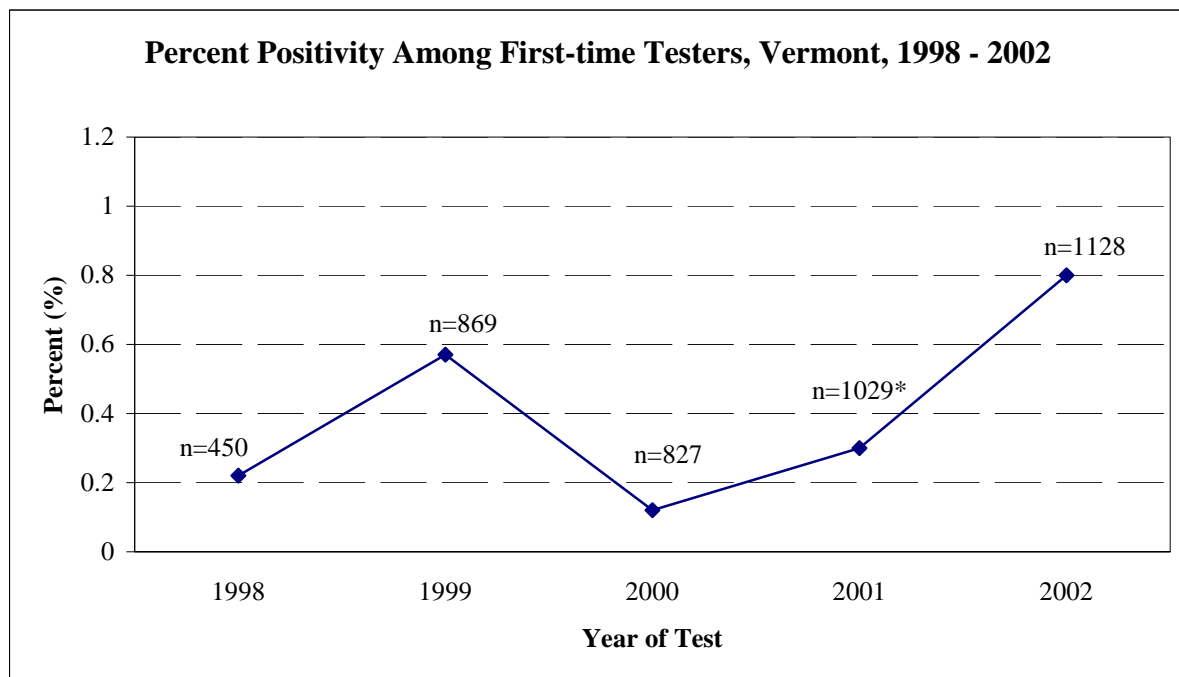
Figure 6.



Over the last five years (1998-2002), the overall volume of testing within Vermont's HIV Counseling, Testing, and Referral system has more than doubled. Along with an overall increase, there has been a rise in the number of persons being tested for the first time. Much of the increase during the last two years can most likely be attributed to the introduction of anonymous oral testing at some sites in 2001.

The percent of persons with a positive result after being tested for the first time (percent positivity) varied from 1998-2002 (Figure 7). There was an increase in percent positivity from 2001 to 2002, as well as a doubling from 1998 to 1999 and from 2000 to 2001. For the period 1998-2002, among those who tested positive and had not been previously tested, 68 percent were male, 32 percent were black, and 63 percent were from within the 25-44 year age group.

Figure 7.



*Introduction of anonymous oral testing.

Overall AIDS Trends

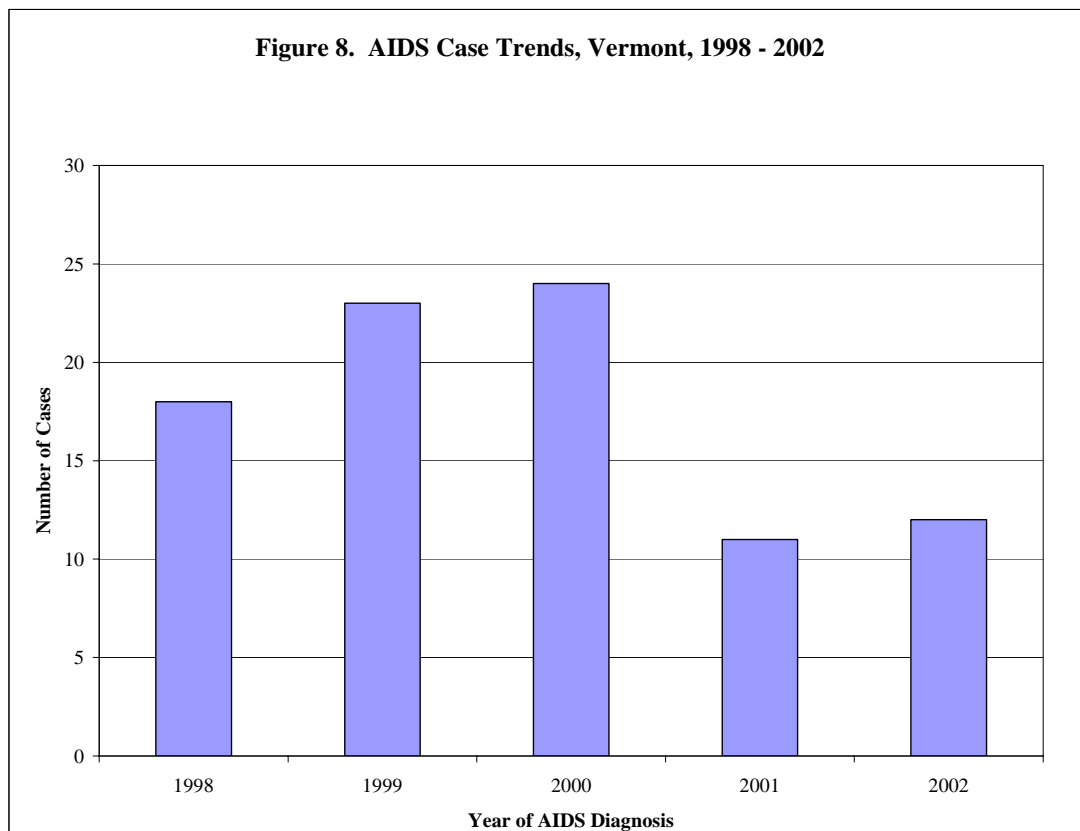
The HIV/AIDS epidemic has affected population groups differently in Vermont, and the impact on these groups has changed somewhat over time. It is therefore important to identify groups most at risk of HIV infection in order to allow for effective prevention and care services planning. Since HIV infection reporting to the Vermont Department of Health has been in place only for a short amount of time, it is necessary to focus on AIDS data to provide this insight. The following section provides, in detail, characteristics of HIV-infected persons, diagnosed while residing in Vermont, with particular focus on those who have been diagnosed with AIDS.

White men who reported having had sex with men (MSM) continue to be the group most affected by the epidemic in Vermont. A recent trend in new AIDS diagnoses suggests a possible shift toward women. There are persons living with HIV/AIDS in every county in Vermont, with the largest proportion in Chittenden County. Blacks represented 10 percent of the population living with HIV/AIDS at the end of 2002 and 15 percent of newly diagnosed AIDS cases from 2000-2002 (Table 4). Less than 1 percent of the state's population is black. The number of persons living with HIV/AIDS continues to grow, while the number of deaths of persons with AIDS has decreased in recent years, possibly reflecting recent advances in treatment effectiveness.

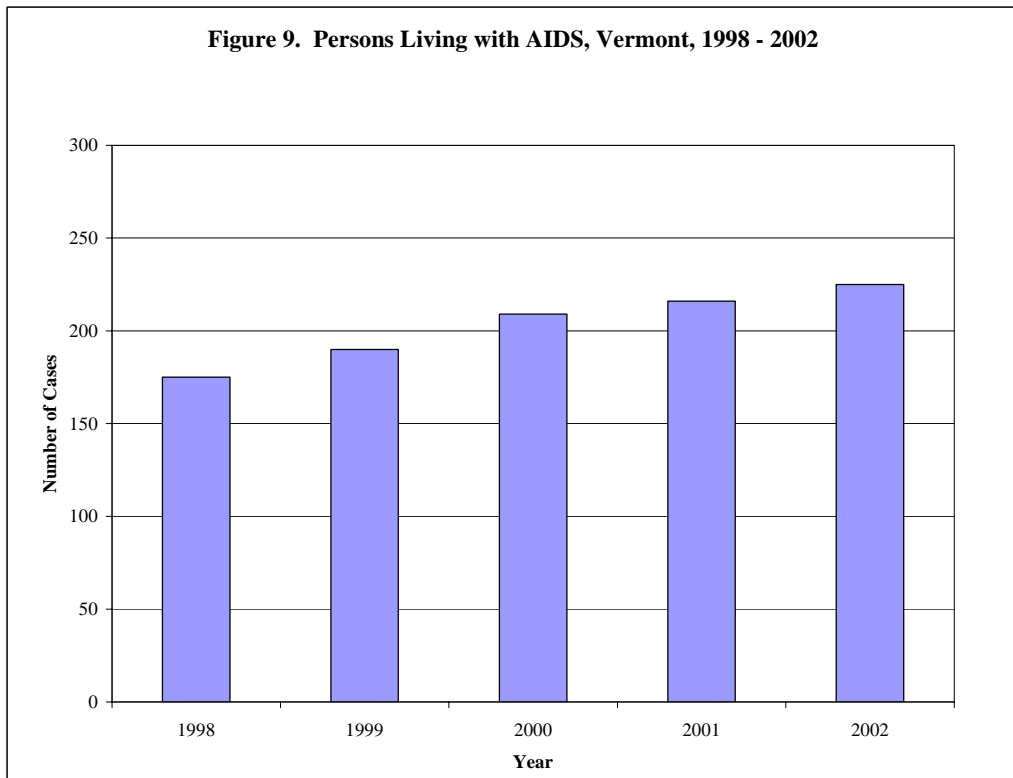
Table 4. Characteristics of Persons Diagnosed with AIDS, Vermont, 2002

	AIDS cases diagnosed, 2000-2002			Persons living with AIDS		
	<u>Number</u>	<u>%</u>	<u>Rate</u>	<u>Number</u>	<u>%</u>	<u>Rate</u>
Sex						
Male	40	85	13.4	192	85	64.4
Female	7	15	2.3	33	15	10.6
Race/Ethnicity						
White, non-Hispanic	35	74	6.0	190	84	32.5
African American, non-Hispanic	7	15	239.6	24	11	821.6
Hispanic	5	11	90.8	10	4	181.7
Age Group						
<13	≤3	2	1.0	≤3	<1	1.0
13-19	≤3	2	1.6	≤3	1	4.7
20-29	7	15	9.7	27	12	37.5
30-39	16	34	17.8	107	48	119.2
40-49	16	34	15.6	65	29	63.3
50+	6	13	3.4	22	10	12.3

In Vermont during 2002, 12 cases of AIDS were diagnosed. This is similar to the number of AIDS cases diagnosed in the previous year (2001), but is significantly less than the number diagnosed in each of the preceding three years (2000-1998) (Figure 8). Chittenden County continues to be the county of residence for the highest percentage of persons newly diagnosed with AIDS. Comparing 1997 through 1999 to 2000 through 2002, however, the percentage of newly diagnosed cases in Windham County nearly doubled as it rose from 8 percent to 15 percent of total cases for each respective period (data not shown). These numbers reflect persons who were diagnosed with AIDS during each respective year/period and subsequently reported to the Vermont Department of Health.



The number of persons known to be living in Vermont with AIDS has continued to increase (Figure 9). At the end of 2002, 225 persons were living with AIDS in Vermont. This number reflects the minimum number of persons estimated to be living in Vermont with HIV disease that has progressed to AIDS. The estimate does not include persons who are living with HIV that has progressed to AIDS not yet diagnosed or reported to Department of Health. Also, the estimate only takes into account persons who were first diagnosed with AIDS while residing in Vermont.



AIDS by Race/Ethnicity and Sex

Less than 5 percent of persons residing in Vermont in 2000 reported racial and ethnic backgrounds other than non-Hispanic white. The epidemic continues to significantly affect persons of color, however. For 2000-2002, the rate of newly diagnosed AIDS cases in persons of color was 25 times greater than the rate in non-Hispanic white persons (Table 5). For the same time period, the rate in non-Hispanic blacks was approximately 50 times greater, and in Hispanics, 15 times greater, than the rate in non-Hispanic white persons. These rates represent an increase in the rate differences between white persons and persons of color when compared to 1997-1999. For this time period, the rate in non-Hispanic blacks was approximately 35 times greater, and in Hispanics, seven times greater, than the rate in non-Hispanic white persons (Table 6). Comparing 2000-2002 to 1997-1999, there was an overall decline in newly diagnosed AIDS cases. Although this decline is reflected in rates for both non-Hispanic population groups, it was not seen in Hispanic men and women, as the rate nearly doubled. Black men continue to be the most significantly affected community group when considering rates of newly diagnosed AIDS cases.

Table 5. Vermont AIDS Cases, by Race/Ethnicity and Sex, 2000-2002.

	Males			Females			Total		
	<u>Number</u>	<u>%</u>	<u>Rate</u>	<u>Number</u>	<u>%</u>	<u>Rate</u>	<u>Number</u>	<u>%</u>	<u>Rate</u>
White, not Hispanic	31	66	10.8	4	9	1.3	35	75	6.0
Black, not Hispanic	5	11	292.2	≤3	4	165.3	7	15	239.6
Hispanic	4	8	145.8	≤3	2	36.2	5	10	90.8
Total	40	85	13.7	7	15	2.3	47	100	7.9

Table 6. Vermont AIDS Cases, by Race/Ethnicity and Sex, 1997-1999

	Males			Females			Total		
	<u>Number</u>	<u>%</u>	<u>Rate</u>	<u>Number</u>	<u>%</u>	<u>Rate</u>	<u>Number</u>	<u>%</u>	<u>Rate</u>
White, not Hispanic	44	75	15.3	≤3	5	1.0	47	80	8.0
Black, not Hispanic	7	12	409.1	≤3	3	165.3	9	15	308.1
Hispanic	≤3	5	109.4	≤3	<1	<1	≤3	5	54.5
Total	54	92	18.5	5	8	1.7	59	100	9.9

AIDS by Age Group

The HIV/AIDS epidemic has continued to affect certain age groups more than others in Vermont. For the period 2000-2002, persons between the ages of 30 and 49 represented well over half (68%) of newly diagnosed AIDS cases (Table 7). This is a decline from 73 percent for the same age group for the time period 1997-1999 however (Table 8). Comparing both time periods, much of this decline can be attributed to the rise in percentage of new AIDS diagnoses in persons from within the 20-29 year age group. For the period 1997-1999, 8 percent of newly diagnosed AIDS cases were persons from within the 20-29 year age group, while for 2000-2002, 15 percent were from this age group. As previously mentioned, the female percentage of persons newly diagnosed with AIDS for 2000-2002 roughly doubled from the 1997-1999 time period. Part of this rise may be attributed to females between the ages of 30 and 49 representing 11 percent of newly diagnosed AIDS cases, which is roughly double the percentage when comparing to the 1997-1999 period (5%). At the end of 2002, 77 percent of persons living in Vermont with AIDS were between the ages of 30 and 49.

Table 7. Vermont AIDS Diagnoses, by Age Group and Sex, 2000-2002

Age group	Males		Females		Total	
	Number	%	Number	%	Number	%
<13	≤3	<1	≤3	2	≤3	2
13-19	≤3	2	≤3	<1	≤3	2
20-29	6	13	≤3	2	7	15
30-39	13	28	≤3	6	16	34
40-49	14	30	≤3	4	16	34
50+	6	13	≤3	<1	6	13
Total	40	85	7	15	47	100

Table 8. Vermont AIDS Diagnoses, by Age Group and Sex, 1997-1999

Age group	Males		Females		Total	
	Number	%	Number	%	Number	%
<13	≤3	<1	≤3	<1	≤3	<1
13-19	≤3	2	≤3	<1	≤3	2
20-29	4	7	≤3	2	5	8
30-39	23	39	≤3	3	25	42
40-49	17	29	≤3	2	18	31
50+	9	15	≤3	2	10	17
Total	54	92	5	8	59	100

AIDS by Mode of Exposure

HIV/AIDS has affected population groups in Vermont with certain HIV-transmission risk characteristics more than the general population. Since AIDS diagnosis reporting to the Department of Health began in 1982, most AIDS diagnoses have been among men who have sex with men (MSM). The percentage of new cases reported as MSM has remained steady over time, while the percentage in other groups has changed (Table 9). The proportion of cases attributed to injection drug use has declined, while the proportion reporting heterosexual contact with a person or persons with, or at increased risk for, HIV infection has increased.

Table 9. Exposure Categories Among Persons with AIDS, Vermont, 1997-2002

Exposure Category	New AIDS Diagnoses, 2000-2002		New AIDS Diagnoses, 1997-1999		Persons living with AIDS	
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>
Men who have sex with men	31	66	27	46	118	52
Injection drug use	≤3	6	10	17	39	17
Men who have sex with men and inject drugs	≤3	2	12	20	14	6
Heterosexual contact	7	15	4	7	26	12
Received transfusion or tissue transplant	≤3	6	≤3	2	6	3
Hemophilia/coagulation disorder	≤3	<1	≤3	2	7	3
Mother with or at risk for HIV-infection	≤3	2	≤3	1	≤3	1
Risk not reported or identified	≤3	2	4	7	14	6
Total	47	100	59	100	225	100

More than half of persons with new AIDS diagnoses during 2000-2002 reporting heterosexual contact as a risk factor were female. More than half of all females with new AIDS diagnoses reported heterosexual contact as a potential transmission mode for 2000-2002, while for 1997-1999, most females reported IDU as mode of exposure (data not shown). The most significant change has been the decline in percentage of new cases reported as MSM who also inject drugs (MSM/IDU).

Comparing persons living with AIDS to newly diagnosed AIDS cases for the three-year period 2000-2002, the percentage of cases attributable to each exposure mode differs (Table 9). In these new cases, there was a significantly greater percentage attributable to MSM than in those living with the disease. Those who reported non-MSM IDU as probable transmission mode comprised 18 percent of persons living with AIDS at the end of 2002, while only 6 percent of newly diagnosed AIDS cases reported this exposure mode.

HIV/AIDS Mortality

Due to advances in treatment, the number of deaths due to HIV/AIDS has declined over the past several years. Since the introduction of Highly Active Anti-Retroviral Therapy (HAART) in 1996, the progression from HIV to AIDS and from AIDS to death has slowed considerably for many persons living with HIV. In addition to the decline in AIDS deaths, the overall number of AIDS cases has also declined, leading to changes in the meaning of surveillance data. In the past, AIDS incidence data could be used to estimate trends in HIV transmission. In contrast, AIDS incidence data now provide an estimate of how many persons living with HIV are not accessing care, receiving treatment, or for whom treatment has not been effective. Since AIDS incidence data no longer accurately reflect HIV incidence, different methodologies must now be used to describe this aspect of the epidemic. The implementation of mandatory HIV reporting by the Vermont Department of Health in 2000 will provide a better understanding of HIV-transmission trends for the future. The following analyses, which are focused on HIV/AIDS mortality, are based on information from vital statistics regarding HIV-related deaths, as well as AIDS surveillance data.

The Vermont Department of Health receives death certificates, retains information on certificates, and periodically publishes summary reports focused on the characteristics of Vermont residents who have died; both underlying and contributing causes of death are retained. For the five-year period 1997-2001, the death rate for men who died of a cause related to HIV disease was roughly 10 times higher than for women (Table 10). Not only is the epidemic affecting blacks disproportionately in terms of rates of new AIDS diagnoses, the HIV-related death rate among this group is higher than other groups as well. For the same time period, the death rate among blacks was almost 200 times greater than the rate among whites. The death rate among persons from within the 35-44 year age group was at least double the rate of other age groups. For 1997-2001, HIV disease was the 6th leading underlying cause of death in the 25 to 44 year age group (Table 11).

Table 10. Deaths with HIV/AIDS as Underlying or Contributing Cause, Vermont, 1997-2001

Sex	<u>Number</u>	<u>%</u>	<u>Rate (per 100,000)</u>
Male	37	93	12.4
Female	≤3	8	1.0
Race			
White	36	90	12.6
Black	4	10	233.8
Age group			
25-34	5	13	6.7
35-44	24	60	23.6
45-54	9	23	9.6
55-64	≤3	5	3.5

Table 11. Ranking of Eight Leading Underlying Causes of Death of Persons Aged 25-44 Years, Vermont, 1997-2001

<u>Rank</u>	<u>Cause of Death</u>	<u>No. Deaths</u>	<u>% of all Vermont resident deaths</u>
1	Accidents (unintentional injuries)	268	1.1
2	Malignant neoplasms	238	0.9
3	Diseases of Heart	139	0.5
4	Suicide	135	0.5
5	Cerebrovascular disease	36	0.1
6	HIV disease	24	0.1
6	Chronic liver disease and cirrhosis	24	0.1
6	Assault (homicide)	24	0.1

As part of the surveillance program, information on deaths among those with AIDS is collected and retained in the AIDS surveillance database. Figure 10 shows a significant decline in AIDS-related mortality after 1996, which corresponds with the introduction of effective treatments mentioned previously. Comparing the characteristics of persons living with AIDS to deaths among persons with AIDS can provide important context necessary for analyzing differences or disparities among population groups. For example, if the proportion of persons dying with AIDS in a particular group is higher than the proportion living with AIDS in the same group, then this may indicate a lack of access to health care or lack of effective treatment in that group. Comparing 1997-2002 deaths among those with AIDS to those living with AIDS at the end of 2002, it does not appear that there is a significant difference in several characteristics among those living and dying with the disease (Table 12).

Figure 10. HIV-related Deaths, Underlying or Contributing Cause, Vermont, 1992 - 2001

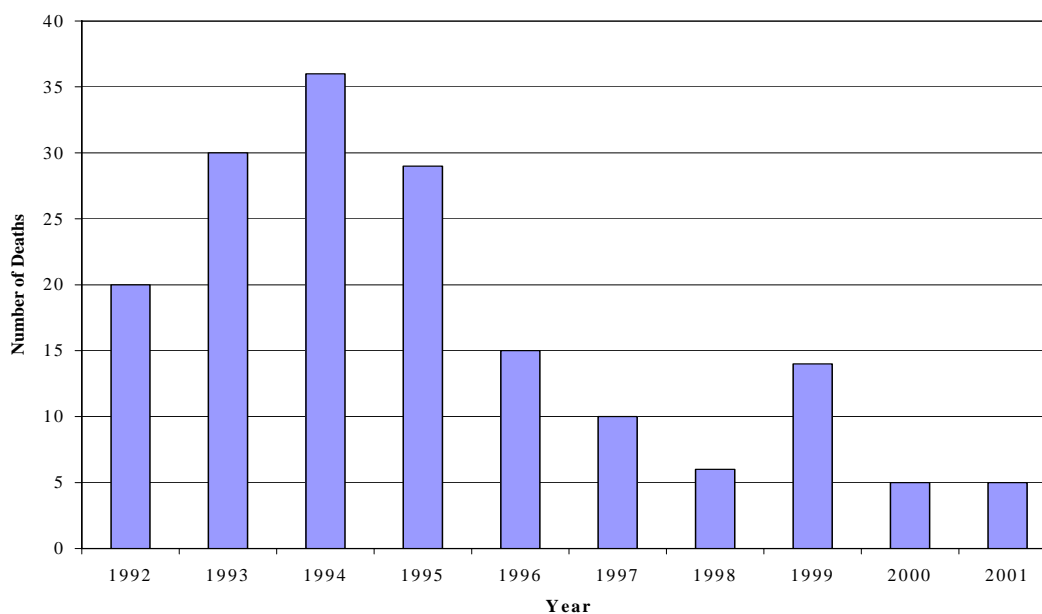


Table 12. Characteristics of Vermont Residents who Died of AIDS During 1997-2002 and Persons Living with AIDS at the End of 2002

	Deaths among persons with AIDS, 1997-2002		Persons living with AIDS, 2002	
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>
Sex				
Male	30	88	192	85
Female	4	12	33	15
Race				
White, non-Hispanic	29	85	190	84
Black, non-Hispanic	4	12	24	11
Hispanic	≤3	3	10	4
Age group				
<13	≤3	<1	≤3	<1
13-19	≤3	<1	≤3	<1
20-29	4	12	27	12
30-39	16	47	107	48
40-49	11	32	65	29
50+	≤3	9	22	10

Question 3

What are the Indicators of Risk for HIV/AIDS in Vermont?

Men Who Have Sex with Men (MSM)

Direct Measures of Risk Behavior

HIGHLIGHTS

- The 2001 Vermont HIV Testing Survey (HITS) found that most (62%) men interviewed had four or more sexual partners in the last month.
- In 2001, the Vermont Youth Risk Behavior Survey (YRBS) found that more than half (54%) of 8th-12th grade males who reported having had sex with males also reported having sex with three or more people in the last three months.
- The Vermont HITS found that 90 percent of MSM reporting having sex with a primary partner did not use a condom during receptive anal intercourse and 76 percent did not use a condom during insertive anal intercourse.
- The Vermont HITS also found that 60 percent of MSM reporting having sex with non-primary partners did use condoms during receptive anal intercourse and 54 percent did use condoms during insertive anal intercourse.
- According to the Vermont YRBS, in 8th-12th grade males who reported having had sex with males, about one-third (30%) of the males reported having used a condom at last sex in 2001. This percentage has declined from 1999 and 1997 rates.
- In 2001, the Vermont YRBS found that, among 8th-12th grade males who reported having had sex with males, more than half (54%) reported having drunk and/or used drugs the last time they had sexual intercourse.
- Heroin use among 8th-12th grade males who reported having had sex with males declined from 1999 to 2001 (51% and 35%, respectively) according to the Vermont YRBS.

In the population of MSM, the following measures of risk behavior are available in Vermont to provide important information on factors that may affect risk for acquiring or transmitting HIV infection:

- number of sex partners
- frequency of condom use or unprotected sex
- substance use

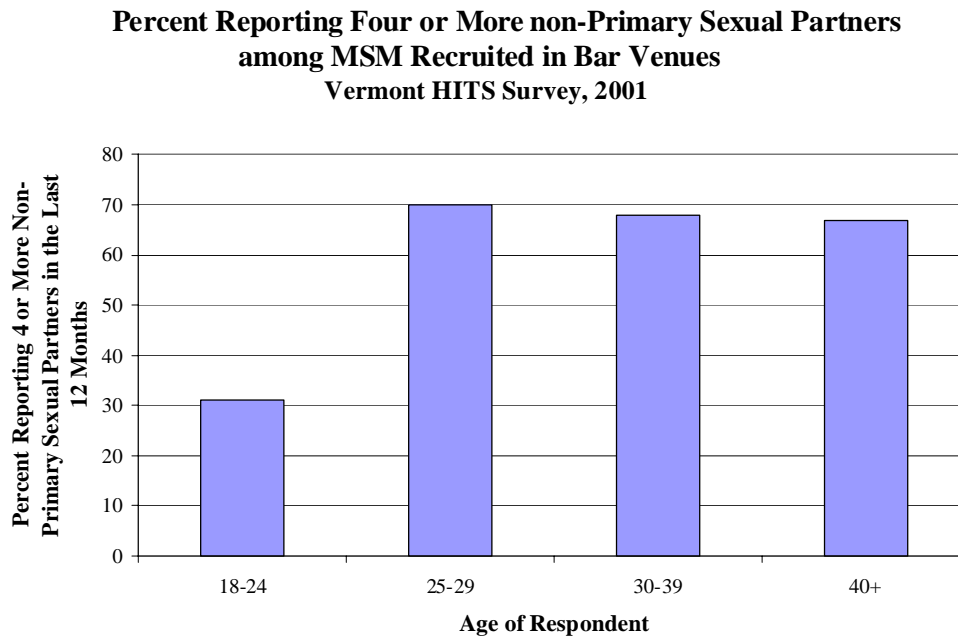
The HIV Testing Survey (HITS) and Youth Risk Behavior Survey (YRBS) provide information on risk behavior in MSM. **HITS** is an anonymous, cross-sectional survey of populations at high risk for HIV infection which was conducted in Vermont at two sites for MSM (Burlington and Brattleboro) in 2001. The two population groups surveyed were MSM and IDUs. MSM participants were recruited from gay bars. They had to have been at least 18 years of age, able to give informed consent, be residents of the state for at least one year, and must not have ever tested positive for HIV; overall, 11 participants (from both MSM and IDU groups) were excluded from analyses because they had tested positive for HIV in the past. In addition, to be considered eligible for the MSM risk group, a man must have had sex with another man within the past 12 months. A total of 59 MSM met inclusion criteria and were part of the MSM-related HITS analyses presented throughout the Profile. As the survey was conducted solely in gay bars, this may limit the ability to provide information that applies to all MSM. However, this survey does provide valuable information on risk behaviors in a population at high risk for HIV infection.

The Vermont **YRBS** is a self-administered questionnaire given to 8th through 12th grade students statewide every other year. Because this survey is administered in school, youth at highest risk, who may be more likely to be absent from school or to drop out, might be underrepresented in this survey. This may be particularly true in higher grade levels and may be compounded by older students being more likely not to be in school. Data presented from the Vermont YRBS are from 1993, 1995, 1997, 1999, and 2001. (For a more detailed description of these surveys and their strengths and limitations, please refer to Appendix A).

Number of Sex Partners

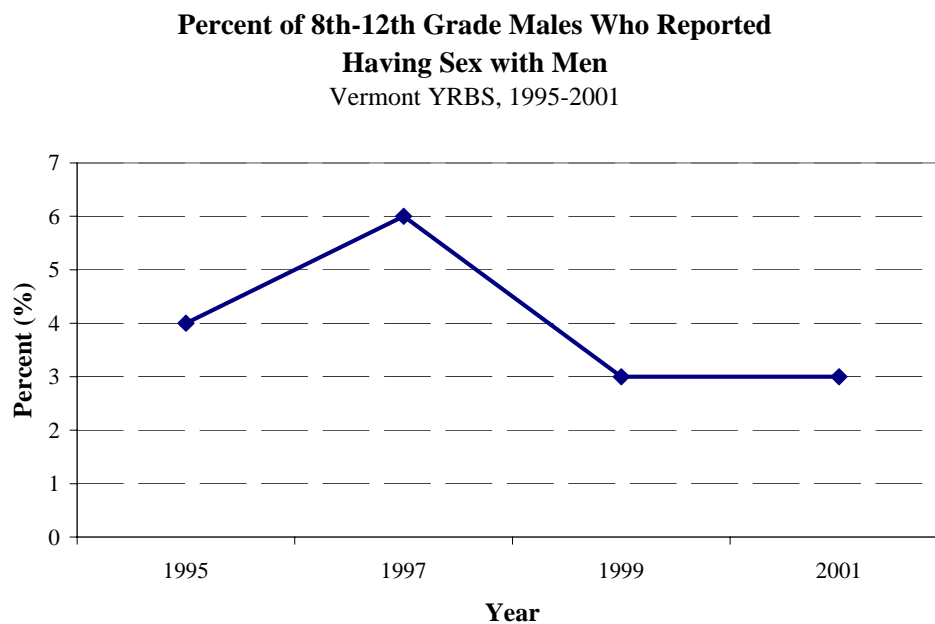
The HITS survey found that most (62%) men interviewed had four or more sexual partners in the past 12 months. Seventy-eight percent (78%) of men interviewed in gay bars reported having at least one non-primary sexual partner in the past 12 months. Nearly half (46%, data not shown) of the youngest age group of MSM interviewed (18-24 years) had only one same-sex partner. By comparison, two-thirds (67%) of the older populations reported four or more partners. No clear trend was determined with increasing age, and results may be a factor of small sample size in some groups (Figure 11).

Figure 11.



According to the Vermont YRBS, the percent of 8th-12th grade males who reported having had same-gender sex fluctuated over the period from 1995 to 2001. In 1995, 4 percent of males reported having had same-gender sex. This percent climbed to 6 percent in 1997 and then declined to 3 percent for both 1999 and 2001 (Figure 12).

Figure 12.



The Vermont YRBS found, among 8th-12th grade males who reported having had sex with males, that the percentage reporting having had sex with four or more people in their life had dropped from 73 percent in 1999 to 61 percent in 2001 (Figure 13). Rates had been 44 percent in 1997 and 70 percent in 1995. The data do not demonstrate a clear trend. The Vermont YRBS also found that, in 2001, more than half (54%) of 8th-12th grade males who reported having had sex with males reported having sex with three or more people in the last three months (Figure 14). This represented no change from 1999 and very little change from 1995 rates (49%). However, it is important to note that 1997 data show only half of this prevailing rate (27%). No clear trend is determinable, though results would seem to indicate that, except for 1997, rates fluctuate minimally around half.

Figure 13.

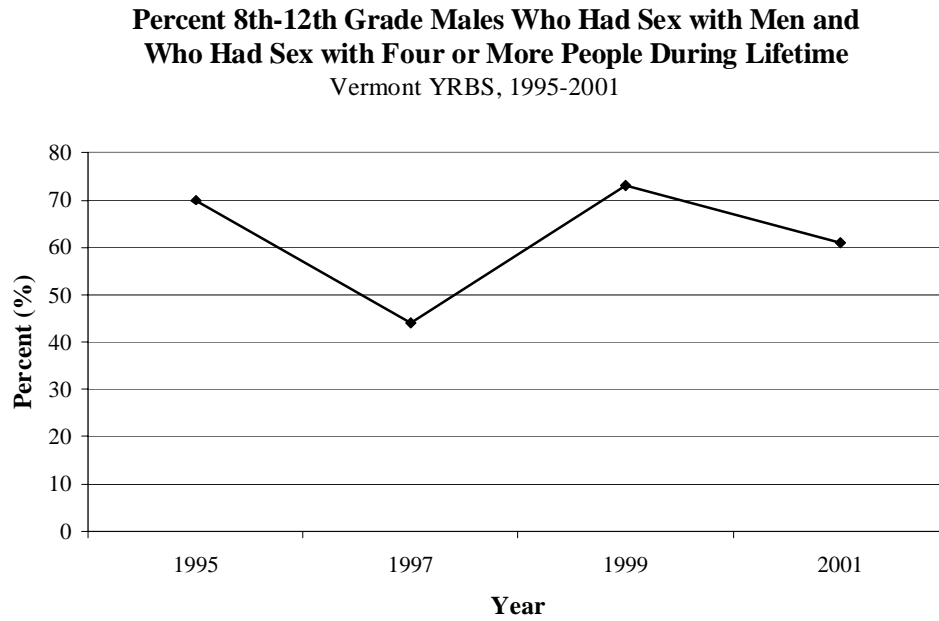
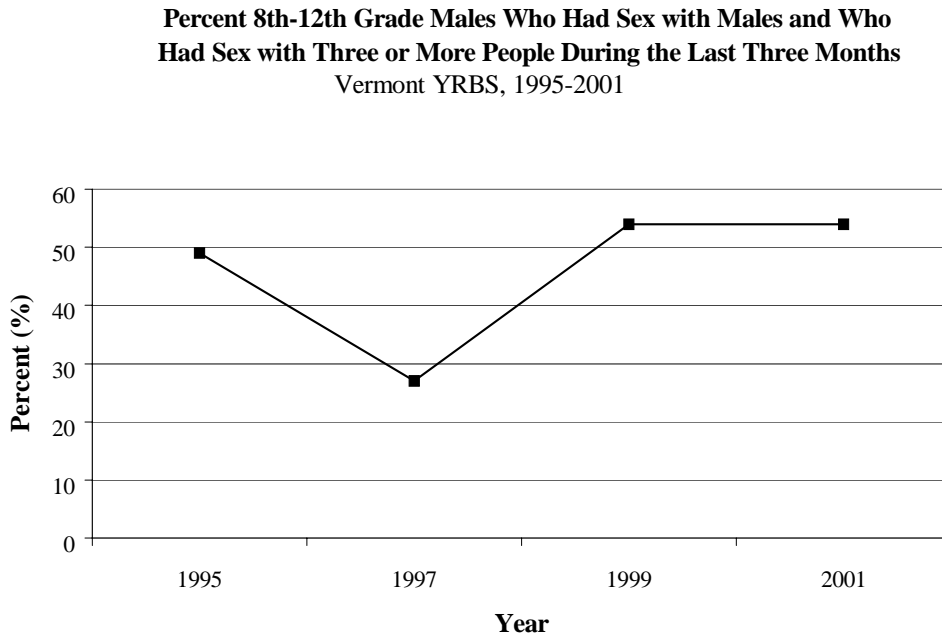


Figure 14.



Frequency of Condom Use or Unprotected Sex

The Vermont HITS study describes a high proportion of unprotected sex. HITS found that of MSM who reported having sex with a primary partner, 90 percent reported not always using a condom during receptive anal sex and 76 percent reported not always using a condom during insertive anal (Table 13). In comparison, slightly more than half of men surveyed always used condoms with their non-primary sex partners (60% during receptive anal sex; 54% during insertive anal sex, Table 14). However, 4 percent reported never using condoms (data not shown). This percentage could be an inaccurate representation, however, due to a small sample size.

Table 13. Receptive and Insertive Anal Intercourse with Male Primary Sex Partners in Past Twelve Months, by Demographic Characteristics, Among Men Recruited in Bar Venue, HIV Testing Survey, Vermont, 2001

	Had same-sex sex in last year, primary	MSM had receptive anal sex, primary		MSM condom use receptive anal sex, primary				MSM had insertive anal sex, primary		MSM condom use insertive anal sex, primary			
	<u>Yes</u>	<u>Yes</u>		<u>Never</u>		<u>Sometimes</u>		<u>Yes</u>		<u>Never</u>		<u>Sometimes</u>	
	No.	No.		No.	%	No.	%	No.	%	No.	%	No.	%
Race/Ethnicity													
White, not Hispanic	25	17	68	6	35	9	53	19	76	8	42	5	26
Multi-racial	6	≤3	50	≤3	<1	≤3	100	5	83	≤3	40	≤3	60
Age ^a													
18-24	11	10	91	≤3	30	6	60	7	64	≤3	29	≤3	43
25-29	6	6	100	≤3	50	≤3	50	6	100	≤3	50	≤3	50
30+	15	5	33	≤3	33	≤3	67	12	80	5	42	≤3	25
Total	32	21	66	7	33	12	57	25	78	10	40	9	36

^aThe age categories 30-39, 40-49, and 50+ have been collapsed into 30+ due to small sample sizes.

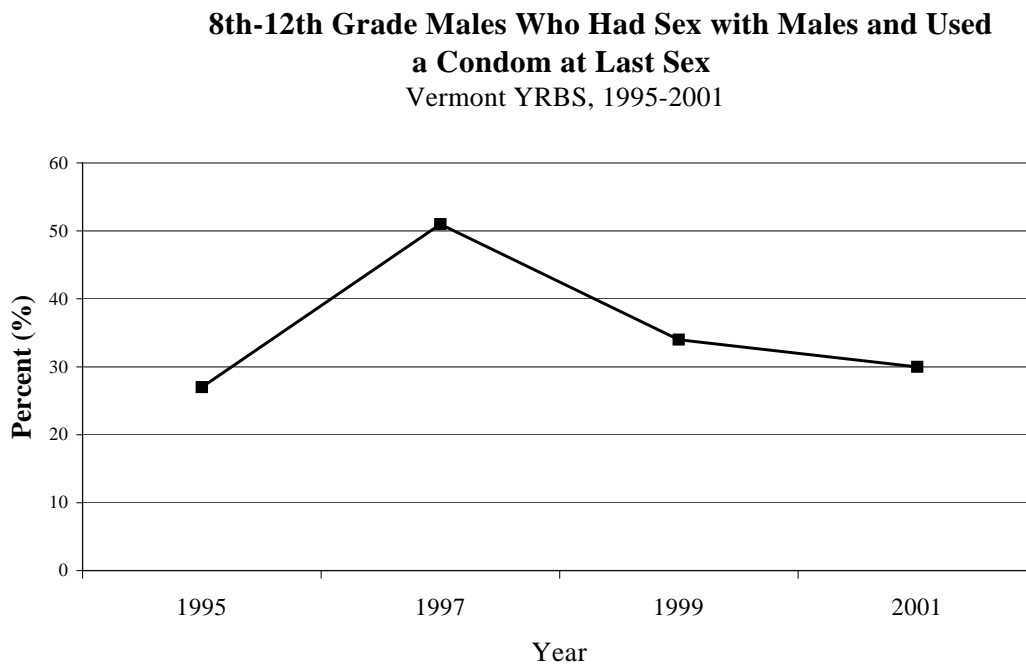
Table 14. Receptive and Insertive Anal Intercourse with Male non-Primary Sex Partners in Past Twelve Months, by Demographic Characteristics, Among Men Recruited in Bar Venue, HIV Testing Survey, Vermont, 2001

	Had same-sex sex in last year, non-primary	MSM had receptive anal sex, non-primary		MSM condom use receptive anal sex, non-primary				MSM had insertive anal sex, non-primary		MSM Condom use insertive anal sex, non-primary			
	<u>Yes</u>	<u>Yes</u>		<u>Sometimes</u>	<u>Always</u>			<u>Yes</u>		<u>Sometimes</u>	<u>Always</u>		
	No.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Race/Ethnicity													
White, not Hispanic	37	19	51	8	42	11	58	19	51	8	42	10	53
Multi-racial	7	4	57	≤3	25	≤3	50	4	57	≤3	50	≤3	50
Age ^a													
18-24	7	7	100	≤3	29	5	71	≤3	29	≤3	50	≤3	50
25-29	8	4	50	≤3	<1	4	100	4	50	≤3	25	≤3	75
30-39	21	11	52	4	36	6	55	15	71	6	40	8	53
40+	12	≤3	25	≤3	100	≤3	<1	5	42	≤3	60	≤3	40
Total	48	25	52	9	36	15	60	26	54	11	42	14	54

^aThe age categories 40-49 and 50+ have been collapsed into 40+ due to small sample sizes.

Among 8th-12th grade males who participated in the Vermont YRBS and reported having sex with males, the percent reporting condom use at last sexual intercourse peaked dramatically in 1997 from 1995, but has steadily declined in 1999 and 2001 (Figure 15). In 2001, about one-third (30%) of 8th-12th grade males who reported having sex with males also reported having used a condom at last sexual intercourse, nearing 1995 levels (27%). This percentage has declined from 1999 and 1997 rates (34% and 51%, respectively). The recent trend shows decreased condom use among 8th-12th grade MSM. This trend represents an increase in unprotected sex among 8th-12th grade MSM.

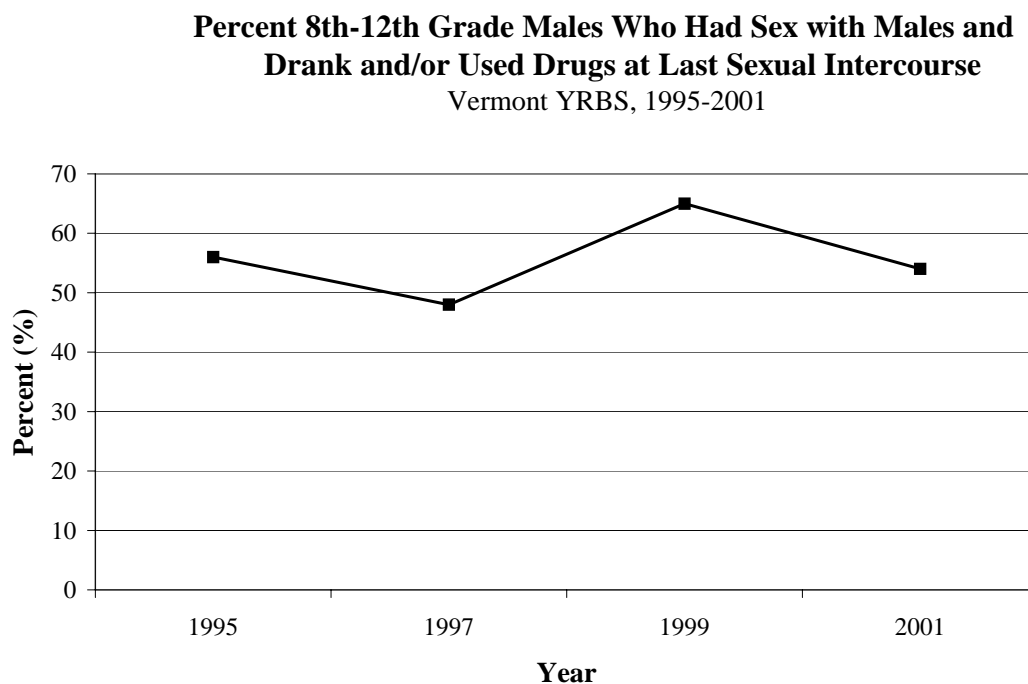
Figure 15.



Substance Use

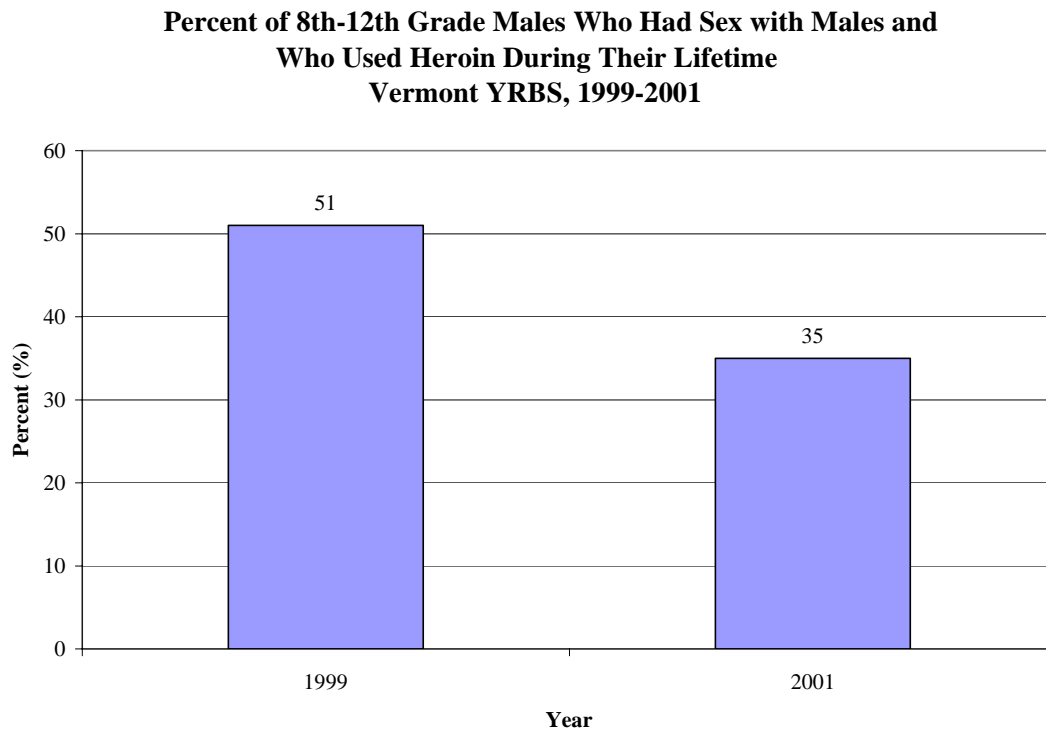
At the time of compiling this profile, there were no substance use data for MSM available as part of the Vermont HITS. However, the YRBS was used to provide information about younger MSM. Among 8th-12th grade males who reported having had sex with males, roughly half (54%) reported having drunk and/or used drugs the last time they had sexual intercourse in 2001. In 1995, 1997, and 1999, the percent of 8th-12th grade males who had sex with males and reported drinking/using drugs before having sex fluctuated (56%, 48%, and 65%, respectively) (Figure 16). Again, no clear trend exists in substance use before sex.

Figure 16.



Heroin use among 8th-12th grade males who had sex with males declined from 1999 to 2001 according to the Vermont YRBS (51% and 35%, respectively). Although this represents a 16 percent reduction between these years, there are not sufficient data to determine a trend (Figure 17).

Figure 17.



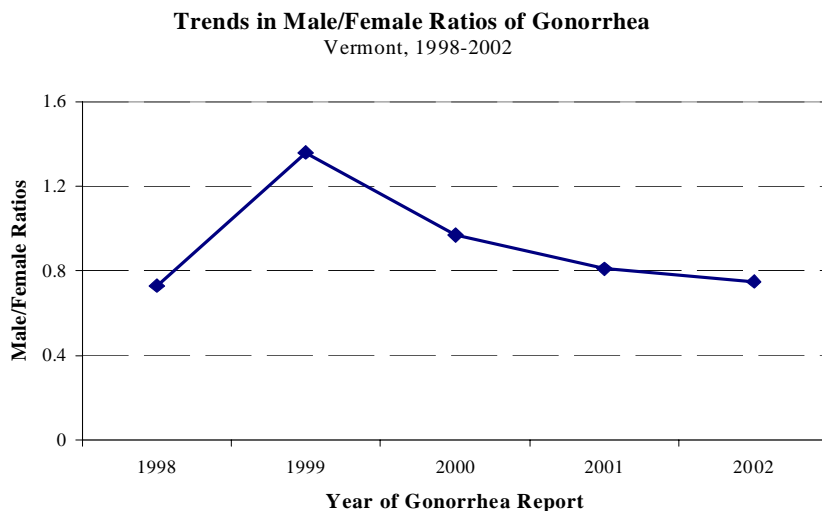
Indirect Measures of Risk Behaviors

HIGHLIGHTS

- In Vermont, the male/female ratio of gonorrhea rates peaked in 1999 at 1.36 and has steadily declined to 0.75 in 2002. This suggests that reported cases of gonorrhea among MSM may be on the decline.

Among MSM, sexually transmitted disease (STD) surveillance data may provide information to identify the potential occurrence of high-risk behavior. One indirect measure that can indicate increasing rates of infections among MSM is the male/female ratio of gonorrhea or syphilis in a particular area (i.e., if the ratio is greater than 1, it may be indicative of STD infection transmission among MSM). In Vermont, between 1998 and 2002, the male/female ratio of gonorrhea peaked in 1999 at 1.36 and has repeatedly declined with 2002 resulting in a ratio of 0.75 (Figure 18). This suggests that reported cases of gonorrhea among MSM may be on the decline.

Figure 18.



The prevalence of syphilis in Vermont is extremely low and trend data are therefore not available.

Injection Drug Users (IDU)

Direct Measures of Risk Behavior

HIGHLIGHTS

- In 1999 and 2000, within Vermont, the National Household Survey on Drug Abuse (NHSDA) found that 8.5 percent of persons aged 12 years or older reported having used an illicit drug at least once during the past month. Drug use was highest among 18-25 year old persons, with 27 percent reporting that they had used illicit drugs in the past month.
- In 2001, the Vermont Youth Risk Behavior Survey (YRBS) found that 3 percent of 8th-12th grade students reported having ever injected illicit drugs. Three percent (3%) also reported having used heroin at least once.
- According to the 2001 Vermont YRBS, Native Hawaiians/Other Pacific Islanders and black 8th-12th grade students reported the highest rates of injection drug use (25% and 24%, respectively). They also reported the highest rates of heroin use (28% and 20%, respectively). Elevated rates among persons of color could be a result of small sample size.
- The 2001 Vermont HITS indicated that 39 percent of IDUs reported sharing needles in the past 12 months.
- The 2001 Vermont HITS also indicated that 34 percent of IDUs reported sharing the same equipment.

Among IDUs, the following measures of risk behavior are available in Vermont to provide important information on factors that may affect risk for acquiring or transmitting HIV infection:

- injection or other substance use
- needle or drug paraphernalia sharing

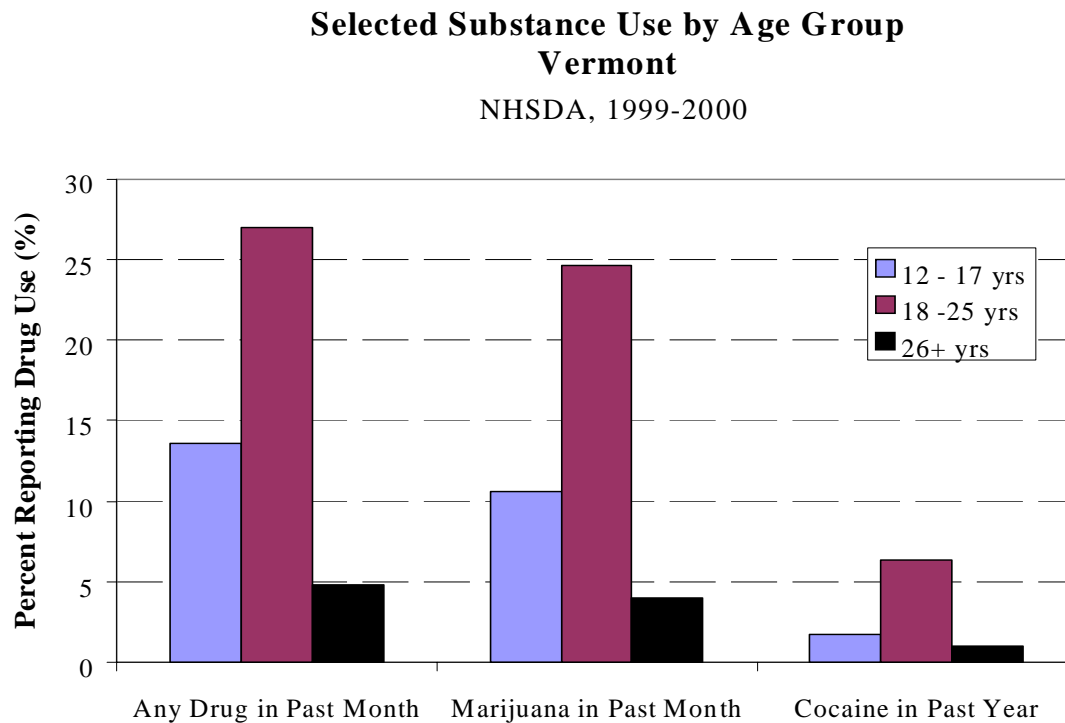
Among IDUs, needle sharing may affect the risk for acquiring or transmitting HIV infection. Important information gathered from the 2001 HITS study describing this activity in Vermont is presented below. A total of 62 IDUs recruited from street and needle exchange program venues met inclusion criteria and were part of the IDU-related HITS analyses presented throughout the Profile.

The National Household Survey on Drug Abuse (NHSDA) is an annual nationwide survey designed to collect data on substance abuse patterns and behaviors in the United States civilian population aged 12 or older. Youth are over-sampled to ensure precise estimates of substance abuse among younger persons. (For a more detailed description of each survey, please refer to Appendix A).

Injection or Other Substance Use

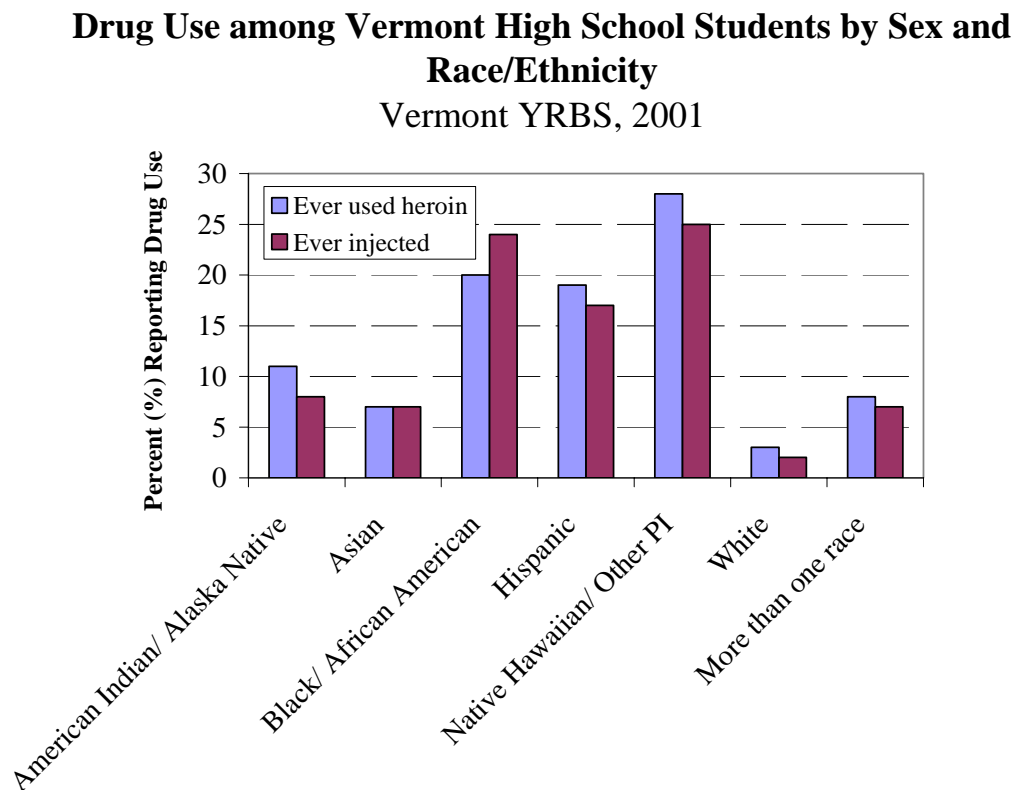
Among the general population in Vermont interviewed in the NHSDA (1999 and 2000 surveys), 8.5 percent of persons aged 12 years or older reported using an illicit drug at least once during the past month. Illicit drugs included marijuana/hashish, cocaine, inhalants, hallucinogens, heroin, and any other prescription-type psychotherapeutic drug used non-medically. Regardless of the type of illicit drug, drug use was highest among persons 18-25 years of age, with 27 percent reporting that they had used illicit drugs in the past month (Figure 19). Approximately 25 percent of 18-25 year olds reported having used marijuana in the past month, while about 6 percent reported having used cocaine in the past year. Reported drug use was highest overall in the younger age groups (12-25 years of age).

Figure 19.



The Vermont YRBS provides additional insight into drug use among 8th-12th grade students (Figure 20). Although it was reported in the 1999-2000 NHSDA surveys that 14 percent of persons in Vermont aged 12-17 had used an illicit drug in the past month, the Vermont YRBS for 2001 reported that 3 percent of 8th-12th graders had ever injected an illicit drug. Experience with injection drugs was higher among male students compared to female students. In addition, 3 percent of 8th-12th grade students had used heroin at least once. Experience with heroin was also higher among male students compared to female students.

Figure 20.

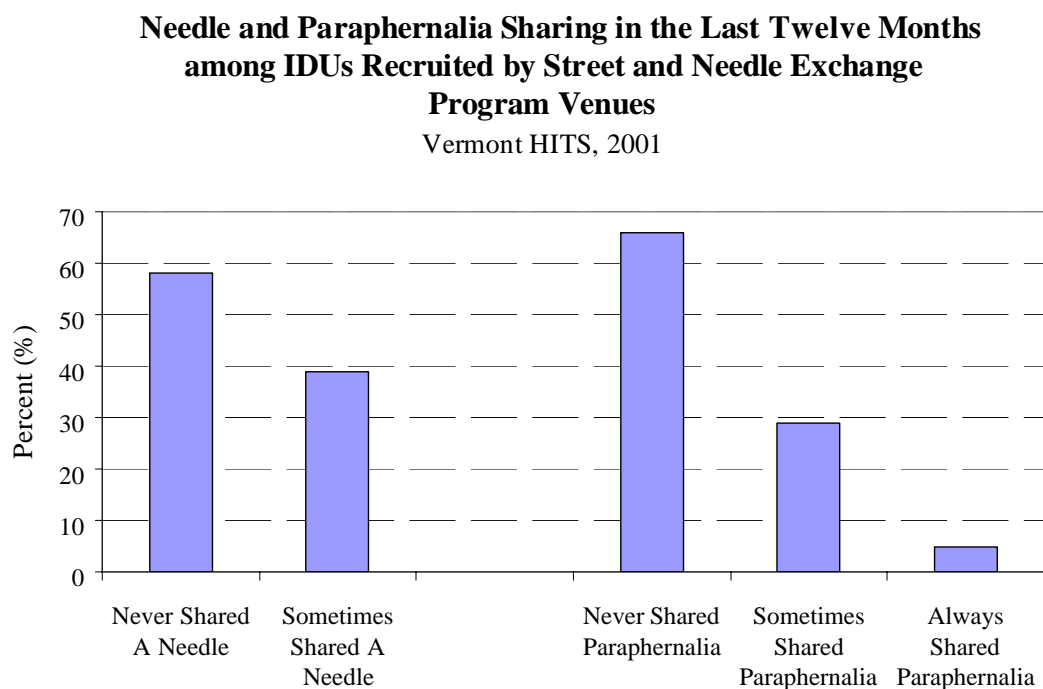


The YRBS indicates that drug use among 8th-12th grade students is dramatically elevated in racial and ethnic groups in comparison to white, non-Hispanic students (Figure 20). Native Hawaiian/other Pacific Islander and black students reported the highest rates of heroin use (28% and 20%, respectively). The same population groups also reported the highest rates of having ever used a needle to inject illegal drugs: 25 percent of Native Hawaiians/other Pacific Islander students and 24 percent of black students reported ever injecting drugs. Hispanic students reported similarly high rates of ever using heroin and ever injecting, 19 percent and 17 percent, respectively. These elevated rates among persons of color could be a result of small sample size. Three percent (3%) of white, non-Hispanic students reported ever using heroin and only 2 percent reported ever injecting.

Needle or Drug Paraphernalia Sharing

Among IDUs surveyed through the 2001 Vermont HITS, 39 percent reported sharing needles in the past 12 months. Thirty-four percent (34%) reported using the same equipment (e.g., cooker, cotton, rinse water) as other people either sometimes or always while injecting drugs (Figure 21). While 29 percent reported receiving a bleach-kit in the past 12 months, only 13 percent reported always using bleach (data not shown). Thirteen percent (13%) also reported using another cleaning product (e.g., water, rubbing alcohol or peroxide) to clean previously used needles.

Figure 21.



Needle sharing behavior appears to be lowest among Hispanic IDUs who responded to the HITS survey (20%) while equal proportions of black and white Vermont IDUs (43% of each population) reporting having shared needles in the past 12 months. Whereas other states conducting the HITS survey have demonstrated needle sharing behaviors which appear to be a factor of age, no relationship between age of respondent and reported needle sharing activity was demonstrated in the Vermont HITS study. However, the younger respondents (aged 18-24 years) were more likely to report that they did not know if they had shared a needle in the past 12 months. No clear association was seen among different levels of education completed and needle sharing nor when examined by employment status or gender in relation to needle sharing activities. It should be noted that these results are limited by the small sample sizes for each group (data not shown).

Money or Drug Exchange for Sex / Number of Sex Partners / Frequency of Condom-Use or Unprotected Sex

HITS Data for Vermont were not yet available at the time of writing this section of the Profile. It is hoped that these data will be incorporated into future amendments to this Profile.

Indirect Measure of Injection Drug Use (IDU)

HIGHLIGHTS

- The number of Vermont substance abuse treatment admissions have risen every year from fiscal year 1999 (FY1999), with FY2002 having 8694 admissions. Thirty to 49-year olds represented the largest age category, while men represented 67 percent of admissions.
- The number of heroin treatment admissions in Vermont has also risen since FY1999, with 833 heroin treatment admissions in FY2002. Nineteen to 24-year olds represented 45 percent of all heroin treatment admissions in 2002, while men represented 56 percent of admissions.
- Women appear to be disproportionately admitted for heroin treatment compared to all substance abuse treatment admissions.

The Division of Alcohol and Drug Abuse Programs (ADAP) within the Vermont Department of Health collects substance abuse treatment admissions data from facilities that receive state funding. These data offer another way to indirectly measure the prevalence of injection drug use in Vermont. The admissions data may not represent unduplicated individuals, but rather they may represent multiple admissions within a calendar year for an individual. (For more detailed descriptions of these data sources, please refer to Appendix A).

Substance abuse treatment admissions in Vermont have risen every year from fiscal year 1999 (FY1999) through FY2002. Vermont had 8694 substance abuse treatment admissions in FY2002. This represents a 4 percent increase from FY2001 (n=8346). This also represents a 16 percent increase in admissions from FY1999 (n=7462). In the last four fiscal years, the number of substance abuse treatment admissions has steadily increased in both sexes (Figure 22). However, in all four fiscal years, the number of substance abuse treatment admissions was higher among men than women (Figure 22). In FY2002, men represented 67 percent of all substance abuse treatment admissions. Substance abuse treatment admissions were highest among persons aged 30-49 years (Figure 23). This age group represented 41 percent of all substance abuse treatment admissions for FY2002.

Figure 22.

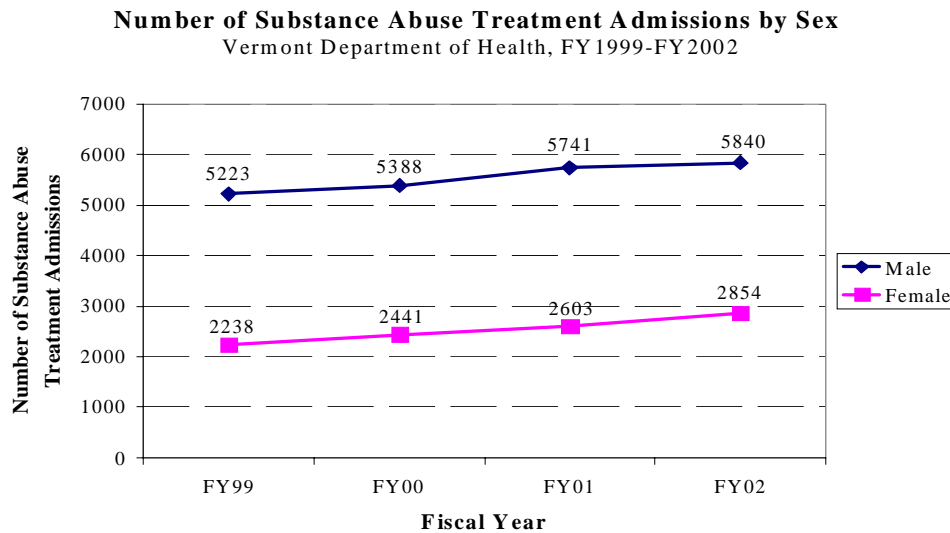
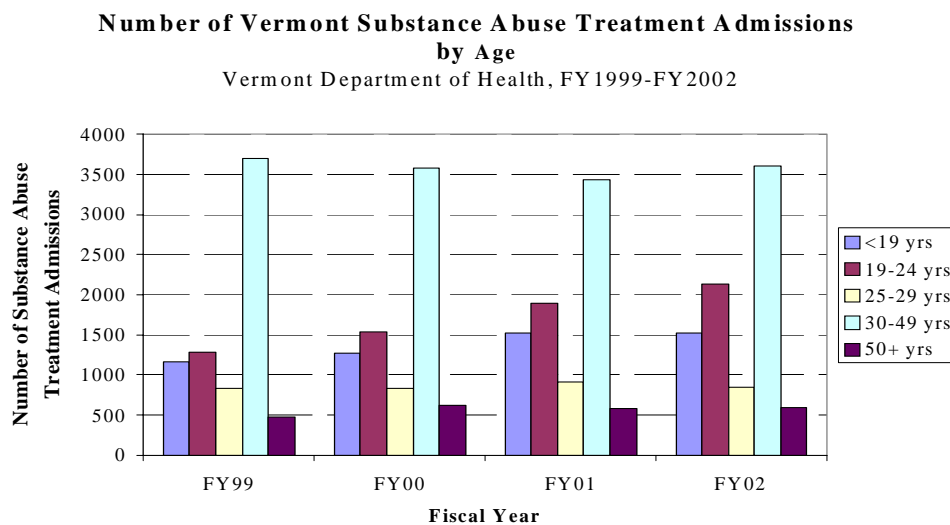


Figure 23.



The number of heroin treatment admissions in Vermont has also been on the rise since FY1999. There were 833 heroin treatment admissions in Vermont during FY2002. This represents a 20 percent increase in heroin admissions from FY2001 (n=694) and over a 300 percent increase from FY1999 (n=276). Heroin treatment admissions have increased at much higher rates in comparison to all substance abuse treatment admissions. Heroin treatment admissions represent almost 10 percent of all the substance abuse treatment admissions for FY2002 and represented about 4 percent of all admissions in FY1999. The age distribution for heroin treatment admissions is much younger than for all substance abuse treatment admissions. Over the last four fiscal years, heroin admissions in persons 19-24 years old have steadily increased and represented 45 percent of all heroin treatment admissions in FY2002 (Figure 24). However, persons 30-49 years old still represented a significant portion (30%) of heroin treatment admissions.

The number of heroin treatment admissions has increased in both males and females over the last four fiscal years (Figure 25). In FY2002, men represented 56 percent of all heroin treatment admissions and women represented 44 percent. As women represent 33 percent of all substance abuse treatment admissions, women are disproportionately admitted for heroin treatment.

Figure 24.

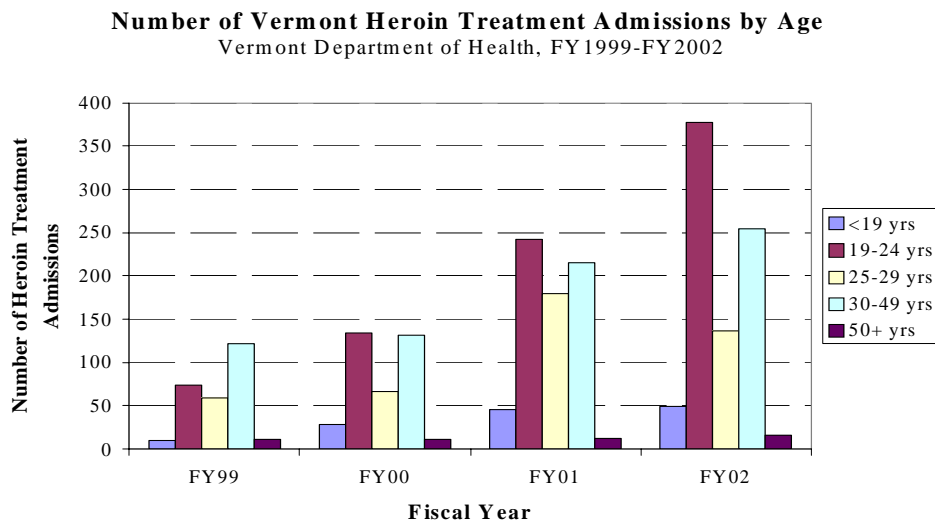
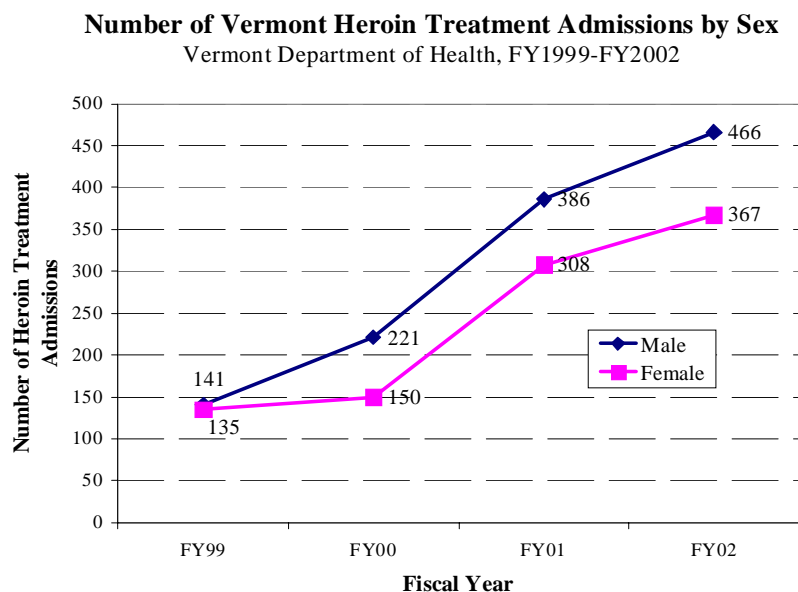


Figure 25.



Heterosexual Populations

Direct Measures of Risk Behavior

HIGHLIGHTS

- In the 2001 Vermont Behavioral Risk Factor Surveillance System (BRFSS), only 5 percent of women and 10 percent of men reported having two or more sexual partners in the past year.
- According to the 2001 Vermont BRFSS, women have lower rates of barrier use at time of last sex than men: 62 percent with a casual partner and 15 percent with a main partner (men: 71% and 20%, respectively).
- In 2001, the Vermont Youth Risk Behavior Survey (YRBS) reported that 9 percent of 8th-12th graders had had sex with four or more people in their lifetime, and 4 percent reported having had sex with three or more people in the last three months.
- In 2001, the Vermont YRBS found that condom use among 8th-12th grade students had increased: 68 percent of males and 59 percent of females reported having used a condom at last sex.
- According to the 2001 Vermont YRBS, 27 percent of 8th-12th students reported having used alcohol or drugs at the time of last sex.

Among heterosexuals, the following measures of risk behavior are available in Vermont to provide important information on factors that may affect risk for acquiring or transmitting HIV infection:

- number of sex partners and frequency of condom use or unprotected sex
- substance use, including injection drug use and
- exchanging money or drugs for sex.

BRFSS and YRBS provide information on risk behavior related to sexual activity in heterosexual populations. Vermont was unable to administer the HITS survey to heterosexual populations as it has no STD clinics. (For a more detailed description of each survey and its strengths and limitations, please refer to Appendix A).

Number of Sexual Partners and Frequency of Condom Use or Unprotected Sex

In the general population surveyed by the Vermont BRFSS in 2001, 5 percent of women reported having two or more sexual partners in the past year (Figure 26). Men were twice as likely to have two or more partners (10%). Twenty-seven percent (27%) of respondents in the 18-24 year old group reported having had two or more partners (data not shown). However, comparisons to other age groups are not possible due to small sample sizes.

Figure 26.

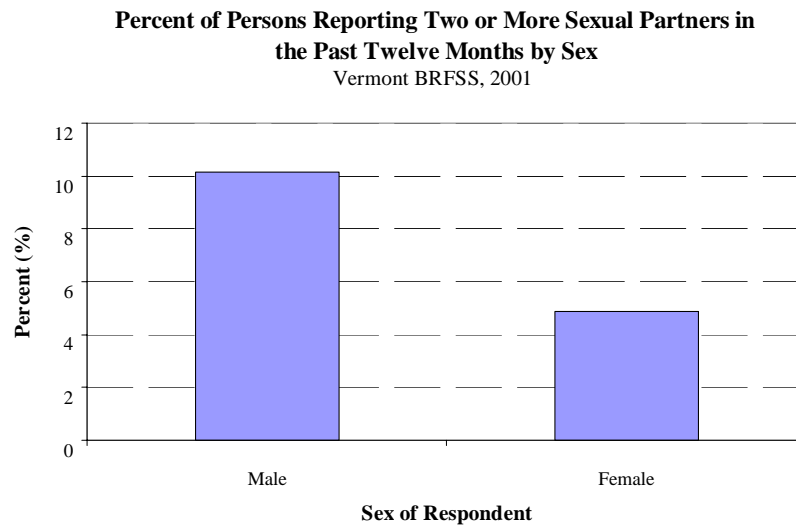
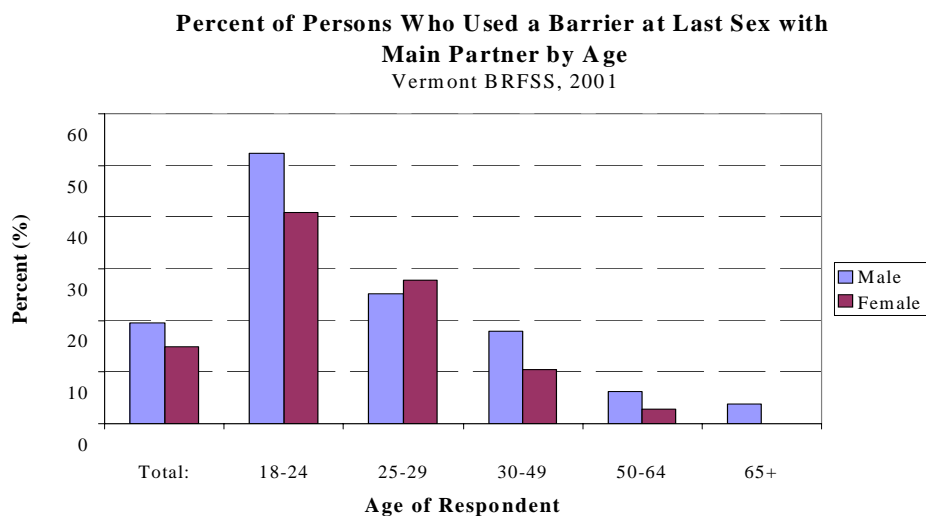
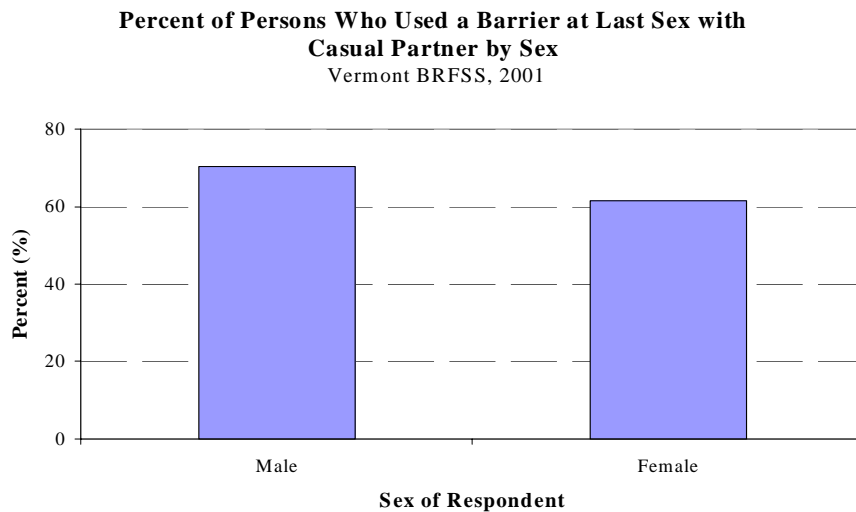


Figure 27.



In the general population, the Vermont BRFSS asked respondents to report whether they used a barrier (e.g., condom, dental dam, etc.) at their last sexual experience. Men reported slightly higher rates (20%) of using a barrier at last sexual contact with a main partner in comparison to women (15%) (Figure 27). Barrier use at last sexual contact with a main partner is negatively correlated with increasing age. Persons 18-24 years old had the highest rates of barrier use with a main partner (46%) while persons aged 65 years and older had the lowest rates (2%). Women had lower rates of barrier use at time of last sex with a casual partner (62%) than men (71%) (Figure 28).

Figure 28.



Among 8th-12th grade students who responded to the YRBS in 2001, 9 percent reported having had sex with four or more people in their lifetime. The proportions of men and women who reported having sex with four or more people in their lifetime were similar, 10 percent and 8 percent, respectively (Figure 29). In 2001, 4 percent of 8th-12th grade students reported having had sex with three or more people in the past three months. Male students (5%) were more than twice as likely to have reported having had three or more partners in the past three months than women (2%) (Figure 30).

Figure 29.

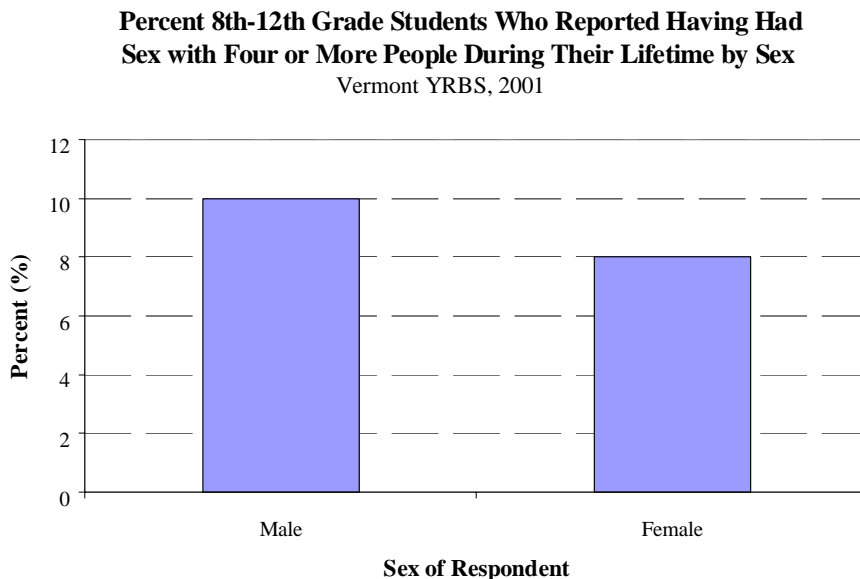
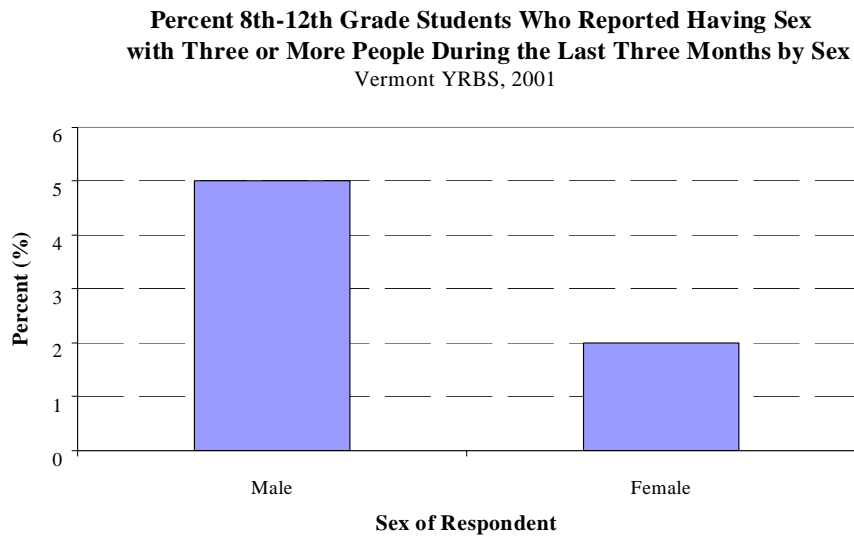
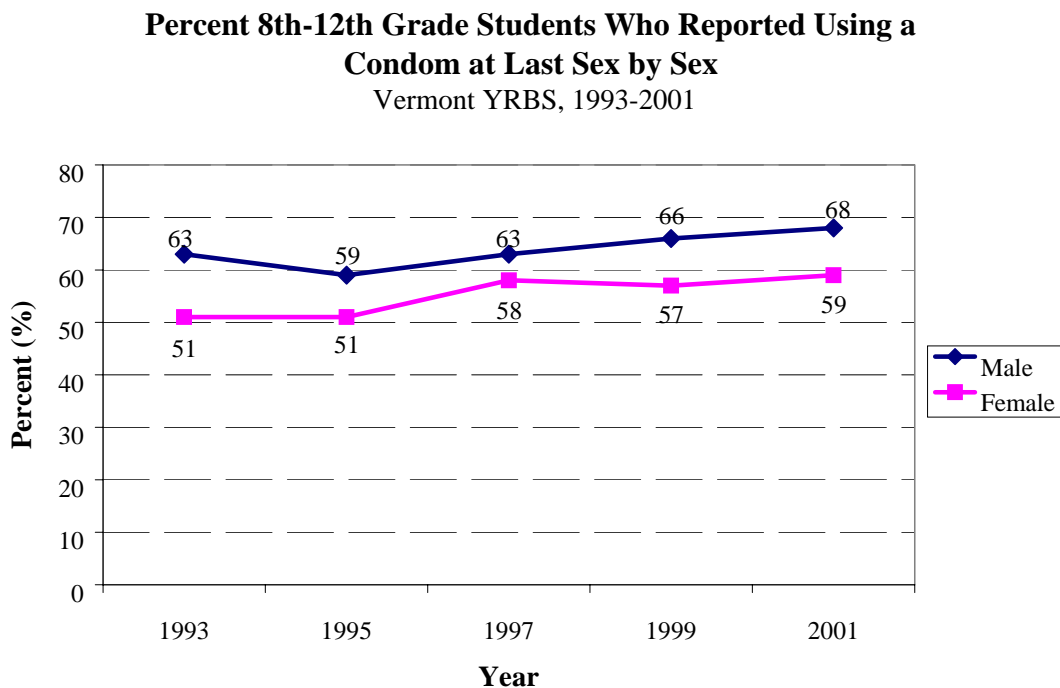


Figure 30.



Data from the Vermont YRBS indicate that condom use among 8th-12th grade males and females has increased since 1993. In 2001, 68 percent of males reported having used a condom at last sexual intercourse. Female 8th-12th grade students reported lower rates of condom use at last sexual intercourse (59%) for 2001 (Figure 31).

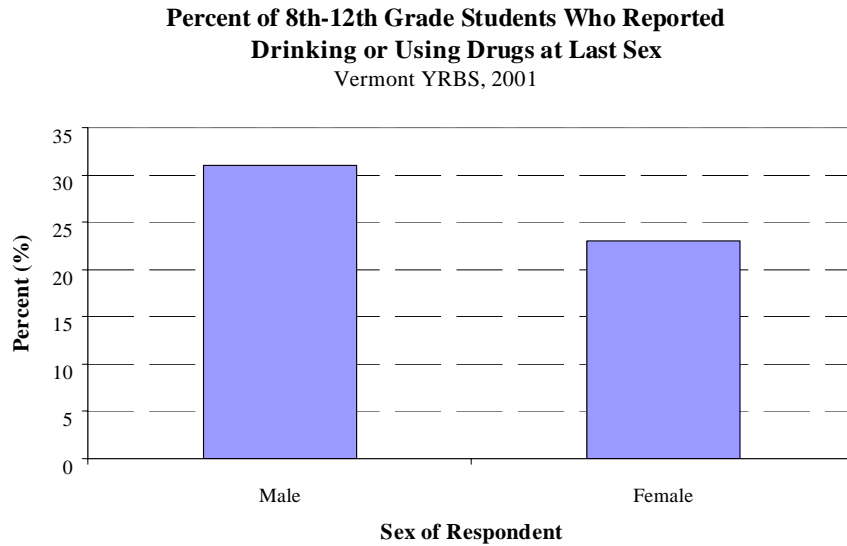
Figure 31.



Substance Use

In 2001, among 8th-12th grade students who participated in the Vermont YRBS and reported having had sexual intercourse, 27 percent reported having used alcohol or drugs at time of last sexual intercourse. A higher percentage of males than females reported having drunk alcohol or used drugs at the time of their last sexual intercourse (31% and 23%, respectively) (Figure 32).

Figure 32.



Indirect Measures of Risk Behavior

HIGHLIGHTS

- Teen pregnancy rates have decreased in Vermont by 13 percent between 1997 and 2001.

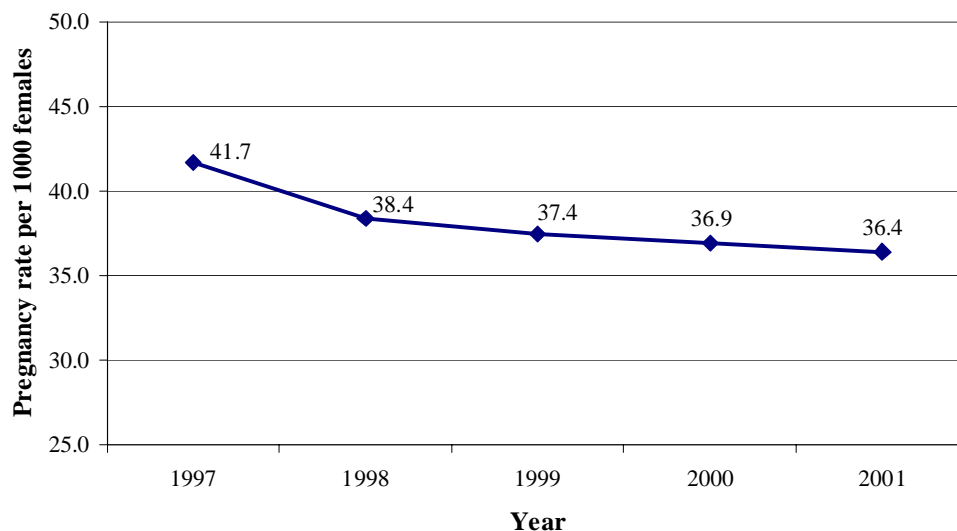
Sexually transmitted disease (STD) surveillance data and vital statistics data on teen pregnancy rates provide information that may help to identify the potential occurrence of high-risk heterosexual behavior. Although increases in STD or teen pregnancy rates do not directly indicate that HIV exposure is increasing, these measures may indicate an increase in unprotected sex.

Teen Pregnancy Rates

Between 1997 and 2001, overall teen pregnancy rates decreased by 13 percent (Figure 33). In 2001, the teen pregnancy rate was 36.4 per 1,000 women aged 15-19 years in Vermont. The national pregnancy rate for teens was 85.6 per 1,000 women aged 15-19 years in 1999³.

Figure 33.

Trends in Teen (15 - 19 years) Pregnancy Rates,
Vermont Department of Health, 1997 - 2001



³ U.S. Teenage Pregnancy Statistics, Alan Guttmacher Institute, May 2003

STD Trends

The prevalence of syphilis in Vermont is low, therefore there are insufficient data available to determine trends.

In 2002, 98 cases of gonorrhea were reported in Vermont. The highest percentage of cases was reported in persons 19-24 years old (45%, Figure 34). Vermont gonorrhea case rates in both male and female populations have increased by approximately one and a half times from 1998 to 2002 (Figure 35). This seems to indicate that rates of unprotected sex may be increasing significantly.

Figure 34.

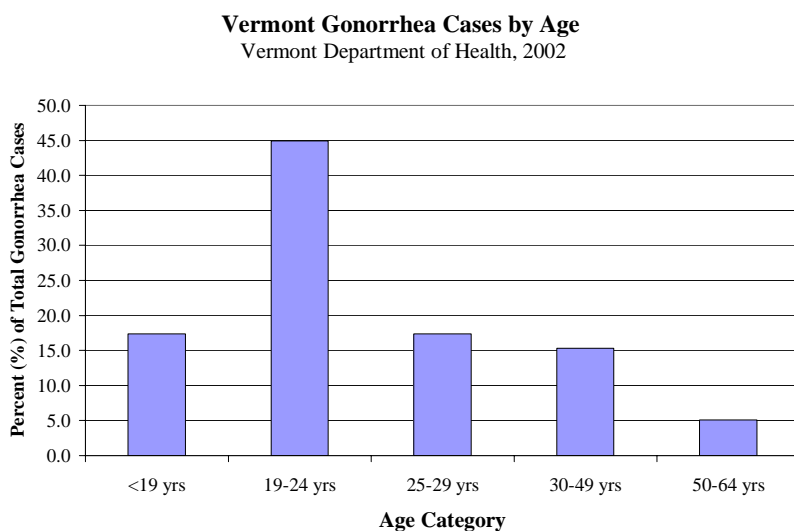
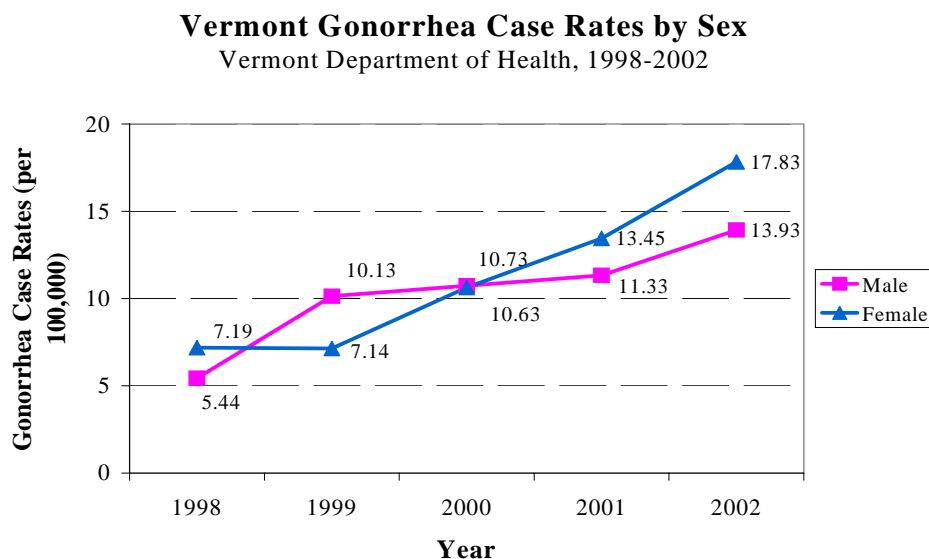


Figure 35.



HIV Testing

HIGHLIGHTS

- Less than half (43%) of those who responded to the 2001 Vermont Behavioral Risk Factor Surveillance System (BRFSS) reported having ever been tested for HIV.
- The 2001 Vermont HIV Testing Survey (HITS) indicated that 10 percent of men who have sex with men (MSM) and 31 percent of injection drug users (IDU) reported not having ever been tested for HIV.
- The 2001 Vermont HITS indicated that 38 percent of MSM who received HIV testing were tested at public health clinics, 16 percent were tested at private physician offices, and 16 percent were tested at referral sites.
- The 2001 Vermont HITS also indicated that 29 percent of IDUs who received HIV testing were tested in drug treatment centers, 24 percent were tested at private physician offices, and 24 percent were tested in hospitals.
- In 2002, the Vermont Counseling, Testing, and Referral (CTR) system performed 2,475 HIV-1 tests.
- Fifty-one percent (51%) of HIV-1 tests within the Vermont CTR system were anonymous and 45 percent were confidential.
- Almost half (47%) of anonymous and confidential tests within the Vermont CTR system were conducted in family planning settings.
- Forty-one percent (41%) of those receiving anonymous and confidential HIV tests within the Vermont CTR system were heterosexuals; 54 percent were women and 42 percent were men.

Data on HIV testing patterns provide information that is helpful in focusing HIV counseling and testing programs. The data may also be used to help identify potential gaps in HIV surveillance data, which represent only persons who have tested positive for HIV. HIV testing data are available from surveys conducted in the general population (BRFSS), and from publicly funded HIV counseling and testing sites.

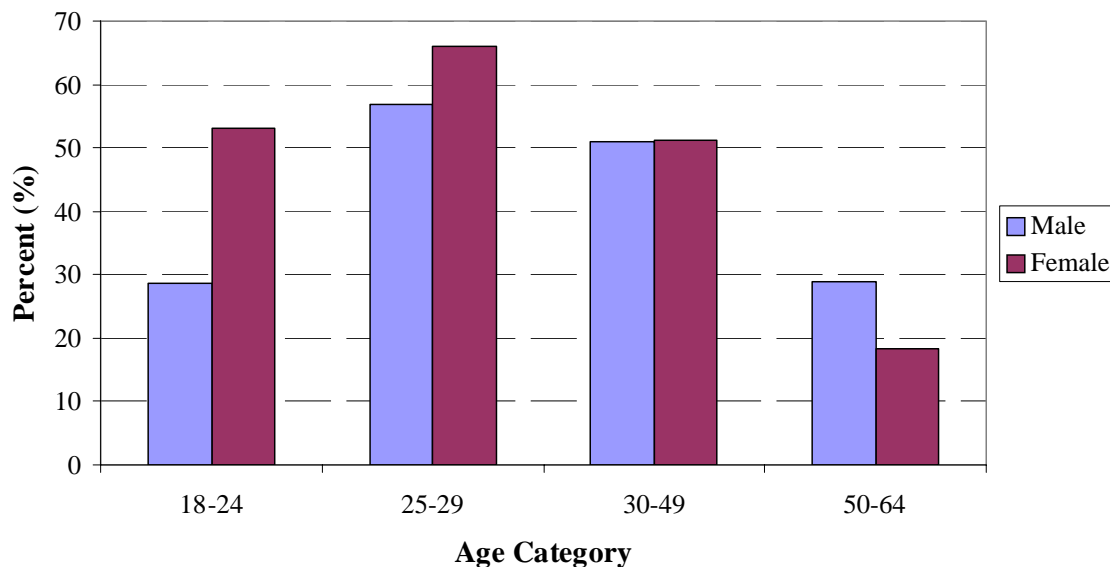
Testing in the General Population (BRFSS)

Overall in 2001, less than half (43%) of the persons surveyed in the Vermont BRFSS reported ever having been tested for HIV. In the 18-24 and 25-29 year old age groups, women were more likely to have been HIV tested than men (53% and 66%, respectively). Reported HIV testing among men 18-24 years old was 29 percent and 57 percent in men 25-29 years old (Figure 36). These data may indicate that more focused HIV screening for younger men is needed.

Figure 36.

**Percent Having Ever Been Tested for HIV other than a Blood
Donation by Age and by Sex**

Vermont BRFSS, 2001



Testing in High-Risk Populations

The HIV testing data from the HITS survey is representative only of individuals who tested negative for HIV. This may limit the interpretations of the following testing information.

Ten percent (10%) of MSM surveyed by the 2001 Vermont HITS reported having never been tested for HIV. Testing rates were much lower in injection drug use populations (Table 15).

Table 15. HIV Testing Status Among MSM and IDU Respondents, HIV Testing Survey, Vermont 2001

HIV Testing Status	Recruiting Venue			
	<u>Bar (MSM)</u>		<u>Street (IDU)</u>	
	Number	%	Number	%
Tested, HIV negative	53	90	43	69
Untested	6	10	19	31
Total	59	100	62	100

When asked by the Vermont 2001 HITS to classify the site of last HIV test, most MSM had their last HIV tests at public health clinics (38%), private doctors offices (16%), or at HIV Counseling, Testing, and Referral sites (16%). In comparison, most injection drug users had their last HIV tests at drug treatment programs (29%), hospitals (24%), and private doctors offices (24%). Very few injection drug users reported having had their last HIV test at a Counseling, Testing, and Referral site (Table 16).

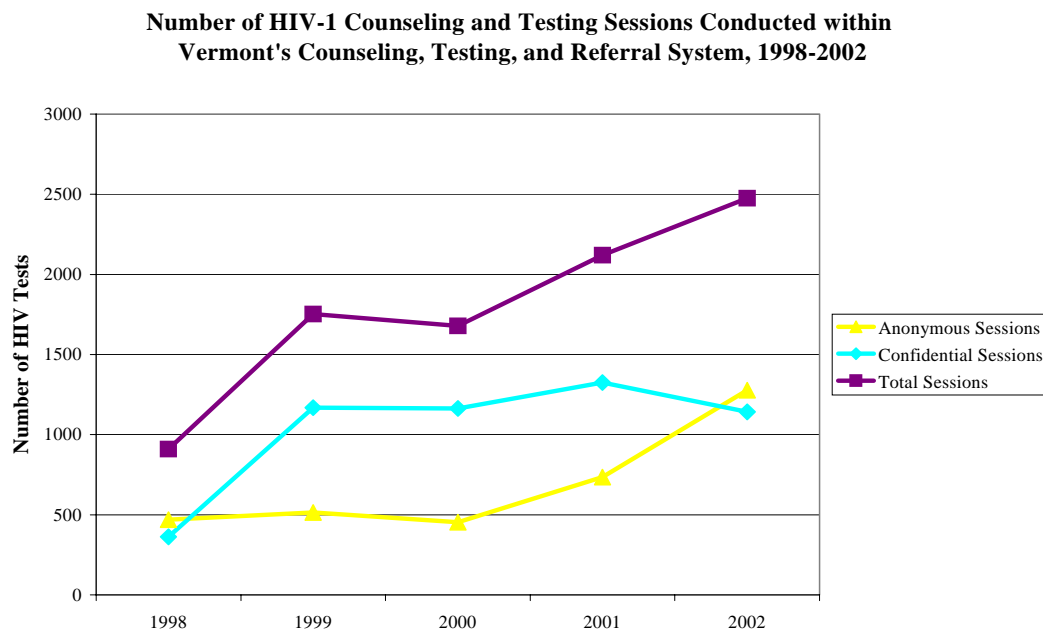
Table 16. Facility of Most Recent HIV Test Among Persons Tested in the Past Twelve Months, by Recruitment Venue, HIV Testing Survey, Vermont, 2001

Site Classification of Last HIV Test	Recruiting Venue			
	<u>Bar (MSM)</u>		<u>Street (IDU)</u>	
	No.	%	No.	%
Public Health Clinic	12	38	≤3	14
Private doctors office (including HMO)	5	16	5	24
Hospital	≤3	9	5	24
Drug treatment program	≤3	<1	6	29
HIV Counseling, Testing, and Referral Site	5	16	<3	<1
Other	7	22	≤3	10
Total	32	100	22	100

Testing at Publicly Funded Counseling and Testing Sites (Vermont Counseling, Testing, and Referral System)

Currently, Vermont has over 30 organizations that provide publicly funded HIV counseling and testing services. These sites include family physicians, family planning clinics, community based organizations, community health centers, and mobile testing venues. The sites perform anonymous and/or confidential tests. The number of HIV tests conducted each year at publicly funded counseling and testing sites has been increasing steadily from 1998 when total tests conducted were 910 (Figure 37). In 2002, 2,475 HIV-1 tests were conducted. This increase in tests is largely due to the expansion of the Counseling, Testing, and Referral (CTR) system that occurred when anonymous oral testing became available in Vermont in July 2001. All oral testing is anonymous. This helps explain the dramatic rise in anonymous tests from 2000 (Figure 37). The rise in anonymous testing has also accompanied a drop in confidential tests.

Figure 37.



In 2002, Vermont HIV Counseling, Testing, and Referral (CTR) data suggest that women are being tested for HIV more than men (Table 17). Sixty percent (60%) of tests conducted with women were confidential whereas 70 percent of men were reached with anonymous tests. About 80 percent of all tests conducted with persons of color were conducted anonymously (Table 17). Almost half (47%) of all publicly funded HIV tests were conducted with persons 20-29 years old. The tests conducted with this age group were almost equally confidential and anonymous. Almost half of publicly funded counseling and testing sessions were conducted in family planning settings (47%). Twenty-five percent (25%) of sessions were conducted at community based organizations and 16 percent were conducted at community health clinics.

Table 17. HIV Counseling, Testing, and Referral Data by Demographics and Testing Location, Vermont, 2002

	<u>Confidential Tests</u>	<u>Anonymous Tests</u>	<u>Total Confidential and Anonymous Tests</u>
Total	1129	1270	2399 ^a
Sex			
Male	316	711	1027
Female	802	545	1347
Unknown	11	14	25
Race/Ethnicity			
White, non-Hispanic	1076	1097	2173
Black, non-Hispanic	17	70	87
Hispanic	9	21	30
Other	13	58	71
Unknown	14	24	38
Age			
<5	≤3	≤3	-
5-12	≤3	≤3	-
13-19	233	152	385
20-29	592	539	1131
30-39	139	259	398
40-49	73	187	260
≥50	30	101	131
Unknown	59	32	91
Site Type			
Community Based Organization	6	608	614
Drug Treatment	18	73	91
Family Planning	1086	39	1125
Community Health Clinic	≤3	394	394
Prison/Jail	11	69	80
Field Visit	≤3	28	28
Other	≤3	57	57
Unknown	5	≤3	5

^aThe total number of confidential and anonymous tests does not equal 2,475 as some tests are not indicated as confidential or anonymous. These tests are not represented on this table.

Table 18. HIV Counseling and Testing Data by Risk for Transmission, Vermont, 2002

Risk Category	<u>Confidential</u>		<u>Anonymous</u>		<u>Total Tests</u>	
	<u>Tests</u>		<u>Tests</u>			
	No.	%	No	%	No.	%
MSM	41	3.6	193	15.2	234	9.8
Heterosexual IDU	39	3.5	105	8.3	144	6.0
Sex Partner at Risk	120	10.6	232	18.3	352	14.7
STD Diagnosis	20	1.8	20	1.6	40	1.7
Sex While Using Drugs	4	0.4	55	4.3	59	2.5
Victim of Sexual Assault	12	1.1	10	0.8	22	0.9
Health Care Exposure	17	1.5	12	0.9	29	1.2
No Acknowledged Risk	257	22.8	117	9.2	374	15.6
Heterosexual, No Other Risk	550	48.7	440	34.6	990	41.3
Other	43	3.8	40	3.1	83	3.5
Unknown	26	2.3	46	3.6	72	3.0
Total	1129	100	1270	100	2399	100

A large proportion (41%) of people accessing the Vermont Counseling, Testing, and Referral system (CTR) in 2002 were heterosexuals with no other risk identified (Table 18). They accounted for almost half (49%) of all confidential tests conducted in Vermont. Sixteen percent (16%) of persons tested for HIV in the Vermont CTR had no acknowledged risk. Fifteen percent (15%) reported having a sex partner at risk for HIV infection. People with sex partners at risk for HIV infection were almost twice as likely to be tested with an anonymous test versus a confidential test (Table 18). MSM represented 10 percent of all persons tested and were five times more likely to use anonymous testing venues than confidential testing venues. Heterosexual IDUs represented only 6 percent of persons tested in 2002 and were more than twice as likely to test anonymously than confidentially.

SECTION 2

Special Questions and Considerations for Ryan White HIV/AIDS Care Act Grantees

Question 1: What are the patterns of service utilization of HIV infected persons in Vermont?

Question 2: What are the Number and Characteristics of Persons Who Know They are HIV-Positive but who are Not Receiving HIV Primary Medical Care?

Question 1

What are the Patterns of Service Utilization of HIV Infected Persons in Vermont?

The following section focuses on information that pertains to HRSA HIV/AIDS care planning groups. Specifically, this section characterizes patterns in the use of services by a number of populations in the state of Vermont. The information presented has been provided by HRSA-funded programs.

In 1990, Congress enacted the Ryan White CARE Act to provide funding for states, territories, and eligible metropolitan areas to offer primary care and support services for individuals living with HIV disease who lack health insurance and financial resources for their care. Congress reauthorized the Ryan White CARE Act in 1996 and in 2000 to support Titles I-IV, Special Projects of National Significance (SPNS), the HIV/AIDS Education Training Centers and the Dental Reimbursement Program, all of which are part of the CARE Act. The purpose of Title II funding is to improve the quality, availability, and organization of health care and support services for individuals and families with HIV disease in each state or territory. In addition, the funding provides access to needed pharmaceuticals through the AIDS Drug Assistance Program (ADAP). In Vermont, ADAP is referred to as AIDS Medication Assistance Program (AMAP). For the purpose of this profile, service utilization patterns and demographic characteristics of persons who receive services funded by the State of Vermont's Ryan White Title II Program, as well as persons who have been reported to the State of Vermont's HIV/AIDS Surveillance Program, are described. It should be noted, however, that there are few resources to help track service utilization. Comprehensive data have been difficult to obtain.

The State of Vermont's Ryan White Title II program utilizes a client-level data system that is based on unique identifiers. This allows for the removal of duplicate counts of service utilization across Vermont's Ryan White Title II funded service organizations in an effort to determine the actual number of individual clients receiving services in Vermont. For the fiscal year 2002 (FY02) period, there were a total of 387 unduplicated unique identifiers reported, which represents the total number of individual Ryan White Title II clients who received services in Vermont; almost two-thirds received services at Comprehensive Care Clinics, while the remainder received services at AIDS Service Organizations.

Since it is not possible to describe the characteristics of this population based on unduplicated counts due to technical limitations, further analyses must rely on utilization counts that have not been deduplicated (i.e., if a client received services at more than one service organization, this client was counted twice in tabulations). Table 19 describes demographic and risk characteristics of Ryan White Title II clients who received services during FY02, based on non-deduplicated service utilization counts.

Seventy-five percent (75%) of Ryan White Title II clients who received services were men, and almost 60 percent of clients were persons 25-44 years old. About thirty-five percent (35%) were persons 45-64 years old. A majority (80%) of clients were white and 10 percent of clients accessing services were black. Of HIV-positive clients, about half were men who reported having had sex with men as mode of transmission; about 25 percent reported heterosexual contact as the transmission mode. The characteristics are similar to the characteristics of persons living with AIDS in Vermont according to the Surveillance Program (Table 19). Figure 38 describes the geographic distribution of Title II clients who resided and received services in Vermont during FY02, by county of residence.

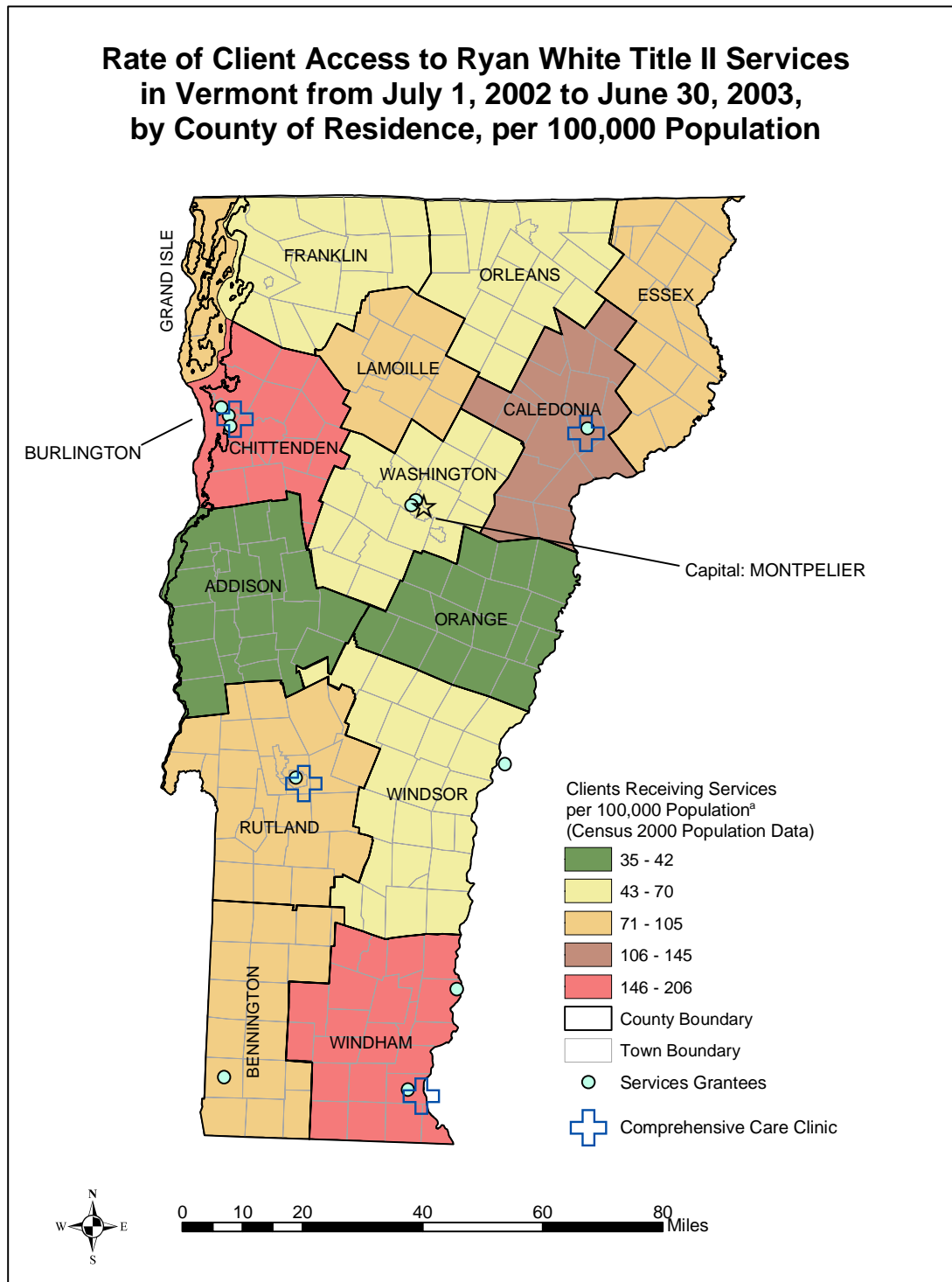
Table 19. Demographics and Risk Characteristics of Ryan White Title II Clients Served from July 1, 2002 through June 30, 2003 in Vermont Compared with Persons Living with AIDS at the End of 2002.

	<u>Title II Clients</u>	<u>Persons Living with AIDS</u>
Sex		
Male	488	192
Female	162	33
Age ^a		Age ^a
<13	7	<13
13-24	35	13-19
25-44	358	20-29
45-64	236	30-39
65+	11	40-49
		50+
Race/Ethnicity		
White, non-Hispanic	518	190
Black, non-Hispanic	68	24
Hispanic	23	10
Other	11	<3
Multiple Races	25	<3
Exposure Category ^b		
Men who have sex with men	293	118
Injection drug users	94	39
Men who have sex with men and inject drugs	13	14
Heterosexual contact	151	26
Receipt of blood products	41	6
No identified or reported risk	23	14

^aData were collected in aggregate form and comparable age breakdowns were not available.

^bIncludes only HIV-positive clients.

Figure 38.



^a Rates based on on non-duplicated utilization counts of clients who received services in Vermont during FY02 (i.e., if a client received services at more than one service organization, the client was counted more than once).

Among clients who received Title II funded services, more than half received services from Comprehensive Care Clinics, the four specialty clinics that treat HIV disease in the State of Vermont (Table 20). About 6 percent of clients received treatment adherence services. Vermont is unique in that much of the case management services provided to persons living with HIV/AIDS are funded with state dollars. A limited amount of case management service is therefore reported under Title II funding.

Table 20. Clients Receiving Title II Funded Services, by Service Category, Vermont, July 1-September 30, 2002

<u>Title II Funded Service Category</u>	<u>Number of Clients Receiving Services</u>
Medical Care	304
Early Intervention Services	14
Mental Health Services	10
Substance Abuse Services	6
Treatment Adherence	64
Support Group ^a	138
Day and Respite Care/Family Support ^b	44
Client Advocacy	20
Case Management	55
Complimentary Therapies	10
Nutritional Support	120
Direct Emergency Financial Assistance	102
Transportation	103

^aIncludes 61 HIV-negative or affected individuals

^bIncludes 15 HIV-negative or affected individuals

AIDS Drug Assistance Program/AIDS Medication Assistance Program

Since 1987, Congress has appropriated funds to assist states in providing FDA-approved antiretroviral therapies to AIDS patients. With the initial passage of the Ryan White CARE Act in 1990, the assistance programs for antiretroviral therapies were incorporated into Title II and became commonly known as AIDS Drug Assistance Programs (ADAP). This program now provides FDA approved HIV-related prescription drugs to under-insured and uninsured individuals living with HIV/AIDS. For many persons with HIV, access to ADAP serves as a gateway to a broad array of healthcare and supportive services as well as other sources of coverage including Medicaid, Medicare, and private insurance. In Vermont this program is referred to as AIDS Medication Assistance Program (AMAP).

Table 21. Demographic Snapshot of Vermont AIDS Medication Assistance Program Clients, June 6, 2003

Sex	<u>No.</u>	<u>%</u>
Male	117	88.6
Female	15	11.4
Age		
<13	≤3	<1
13-19	≤3	<1
20-29	6	4.5
30-39	23	17.4
40-49	65	49.2
50+	38	28.8
Race		
Black, non-Hispanic	15	11.4
White, non-Hispanic	105	79.5
Ethnicity		
Hispanic	6	4.5
Total	132	100

The demographic snapshot of the AMAP program in Vermont only represents the demographics of the program on June 6, 2003 and is not necessarily representative of the program throughout the fiscal or calendar years. Most people accessing ADAP/AMAP in Vermont are male (87%, Table 21). Almost half (49%) are 40-49 years old. Twenty-nine percent of AMAP clients are age 50 and older. About one-fifth (17%) are 30-39 years old. There are few clients who are younger than 30 years old. Most clients are white, non-Hispanic (80%). Eleven percent (11%) are black, non-Hispanic and 5 percent are Hispanic. These demographics are similar to the demographics of persons living with AIDS in Vermont.

HIV Medical Care in Vermont

The prioritization and allocation of Ryan White Title II resources for HIV care requires an understanding of the patterns of HIV medical care among persons living with HIV/AIDS, as well as persons already receiving care through Title II services. Monitoring the proportion of HIV infected persons that receives recommended standards of care may help public health entities to explain observed differences in morbidity and mortality associated with HIV infection. Currently, the HIV/AIDS surveillance system in Vermont does not collect HIV medical care information. There have been no state or federal resources directed toward surveying HIV medical care in Vermont, therefore no data are currently available.

Question 2

What are the Number and Characteristics of Persons Who Know They are HIV-Positive But Who are Not Receiving HIV Primary Medical Care?

Currently there are no resources or mechanisms in place to assess this. It is hoped that federal resources will become available to perform a needs assessment within HIV infected populations to better determine the needs of those persons not accessing medical care.

APPENDIX A: PROFILE DATA SOURCES

Core HIV/AIDS Surveillance

In 1982 the Vermont Department of Health implemented AIDS case surveillance under its Communicable Disease Regulations. The Vermont legislature added HIV infection reporting by unique identifier code to the Communicable Disease Regulations in 1999, and HIV reporting was implemented in March of 2000. Standardized case report forms for adult and pediatric HIV infection and AIDS cases were developed using the CDC case report forms as templates. These forms collect information on sociodemographic variables, mode of exposure, laboratory and clinical findings, vital status, and referrals for treatment or services. In addition, death certificate data are used for active case finding on a quarterly basis.

An Epidemic Intelligence Service Officer from the CDC conducted an evaluation of Vermont's HIV surveillance system in September 2001. At the time of the evaluation, the CDC estimated that there were approximately 200 AIDS cases in Vermont. The Vermont Department of Health had received 201 AIDS case reports, meeting the minimum performance standards set by CDC (i.e., $\geq 85\%$ of cases reported) for completeness of AIDS case reporting. In addition, at least 85 percent of reported cases included risk information. In collaboration with the CDC, the Vermont Department of Health conducted a timeliness evaluation of AIDS case reports and found that 70 percent of AIDS cases were being reported within six months of diagnosis, meeting the minimum performance standard of at least 66 percent of cases reported to the state within six months. Accuracy of Vermont's AIDS case data was not measured. The Vermont Department of Health does not double-key case reports and does not have established protocols for measuring duplicate or incorrectly matched case reports.

At the time of the Epidemic Intelligence Service Officer's evaluation, the CDC estimated that there were between 200 and 600 cases of HIV infection in Vermont. Between March 2000 and September 2001, the Department of Health received 141 HIV case reports, resulting in a completeness estimate between 23.5 percent and 70.5 percent. While below the minimum performance standard of ≥ 85 percent complete, prevalent HIV case reports were still being received. It should also be noted that the case estimation techniques used by the CDC at the national level might not be appropriate in rural states such as Vermont. Vermont was not required by the CDC to conduct a timeliness evaluation for the newly established HIV reporting system. Timeliness evaluation was not required by the CDC if: (1) the HIV reporting system was less than two years old, and/or (2) the state used a coded identifier and the performance of the coded identifier had not been established. Both of these conditions were true for Vermont's HIV surveillance system. Accuracy of Vermont's HIV case data was not measured for the reasons cited above.

Supplemental Surveillance Project

HIV Testing Survey (HITS)

HITS assesses HIV testing patterns, reasons for seeking or avoiding testing, knowledge of state policies for HIV surveillance, and risk behaviors among a sample of persons at high risk for HIV. HITS is an anonymous, venue-based survey that focuses on persons who are at least 18 years of age and at high risk for HIV infection. The data can be used to evaluate HIV surveillance data by determining the characteristics of persons who delay testing, who test anonymously, or who avoid testing. Information collected is self-reported and may be subject to recall and/or reporting biases. In 2001, HITS was conducted among men who have sex with men (MSM) and injection drug users (IDU) in Vermont. Interviewees were recruited at gay bars (MSM) and street locations (IDU). Because HITS data are not population-based, they may not represent the entire high-risk population in Vermont. Participants who reported testing positive for HIV were excluded from analyses.

Behavioral Surveys

Behavioral Risk Factor Surveillance System (BRFSS)

In 1984, the CDC established the Behavioral Risk Factor Surveillance System (BRFSS) to collect state-level data on personal health behaviors using a standard core questionnaire so that data could be compared across states. The BRFSS is a population-based random-digit-dialed telephone survey of adults. It is administered and supported by the Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, CDC, and is an on-going data collection program. By 1994, all states, the District of Columbia, and three territories were participating in the BRFSS. A sexual behavior module was added to the survey in 1994, 1995, 1996, 1998, and 2000. In this module, adults (ages 18-49) were asked about their number of sexual partners, condom use, and treatment for STDs.

National Household Survey on Drug Abuse (NHSDA)

The NHSDA is an annual nationwide survey designed to collect data on substance abuse patterns and behaviors in the United States civilian population aged 12 or older. Youth are over-sampled to ensure precise estimates of substance abuse among younger persons. It is administered through the Substance Abuse and Mental Health Services Administration (SAMHSA) of the US Department of Health and Human Services. The data are accessible online at www.samhsa.gov/oas/

Youth Risk Behavior Survey (YRBS)

The Vermont Youth Risk Behavior Survey, part of the CDC's Youth Risk Behavior Surveillance System, collects information on health-risk behaviors among youth and young adults in each of the following categories: behaviors that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and

sexually transmitted diseases, including HIV infection; unhealthy dietary behaviors; and physical inactivity. Since 1985, the Vermont Department of Health Division of Alcohol and Drug Abuse Programs has administered biennial surveys examining alcohol and drug use, and perception of use, among a representative sample of Vermont students in grades eight through twelve. In 1993, in collaboration with the Vermont Department of Education, the survey was broadened to include health risk items other than those related to alcohol and drugs. The addition of these items, taken from the CDC-developed YRBS survey, lead to the development of the Vermont YRBS for 1995. In 1999, 81 percent of randomly selected schools participated in the Vermont YRBS and 80 percent of students responded to the survey, for an overall response rate of 65 percent.

Sexually Transmitted Disease (STD) Surveillance

Chlamydia trachomatis infection, gonorrhea, and syphilis are reportable under Vermont's Communicable Disease Regulations. Laboratories, hospitals, physicians, insurance companies, and other health care providers are required to report all cases to the Vermont Department of Health. Demographic and risk history information is entered into the National Electronic Telecommunications System for Surveillance (NETSS) and transmitted to the CDC (without identifiers) on a weekly basis. Partner counseling and medical referrals are provided.

HIV Counseling and Testing Data

Counseling and Testing System (CTS)

The HIV Counseling and Testing System (CTS) was originally developed in 1988 as a means to assist CDC-funded HIV prevention project areas (such as Vermont) in collecting data on the population receiving counseling and testing services. The data are used to guide the development of HIV prevention programs and to estimate the need for early intervention service for persons with HIV infection. Funding from the CDC supports the Vermont Counseling, Testing, and Referral (CTR) system, which consists of anonymous and confidential voluntary HIV counseling, testing, and referral services with emphasis on a client-centered risk-reduction counseling model.

In Vermont, 14 sites offer anonymous blood testing, 13 sites offer confidential blood testing, and 15 sites offer anonymous oral testing (with some sites offering more than one testing option). These sites include Planned Parenthood clinics, community-based organizations, and a community health center. Demographic and behavioral data as well as HIV test results are reported to the Vermont Department of Health by each testing site. Data are entered into CTS software provided by the CDC and are transmitted to the CDC on a monthly basis. Data cannot distinguish multiple tests on the same individual and cannot be used to estimate statewide HIV seroprevalence.

Vital Statistics Data

Statewide vital registration began in Vermont in 1857. The current vital statistics system in Vermont includes seven types of vital events: births, deaths, marriages, civil unions, divorces, fetal deaths, and abortions. Birth certificates must be filed with the town clerk in the town of birth within ten days of a birth. The birth certificate is recorded and filed in the town and a certified copy is sent to the Department of Health. Physicians must complete the cause of death information on a death certificate and sign the certificate. Completed certificates are filed (often by funeral directors) with the town clerk, who sends a certified copy to the Department of Health. Marriage and civil union certificates also reach the Department of Health via the town clerk; divorce certificates are forwarded by the court clerk. Reports of fetal death and abortion are sent directly to the Department of Health by a physician, hospital, or clinic. By law, these reports are for statistical purposes only, are not public records, and are destroyed after five years. The Department of Health also receives copies of certificates of all Vermont resident births and deaths that occur in other states and Canada. Vital records data are coded and entered into a database, and data are sent to the National Center for Health Statistics.

Substance Abuse Treatment Admissions Data

The Alcohol and Drug Abuse Program (ADAP) within the Vermont Department of Health collects substance abuse treatment admissions data from facilities that receive state funding. All facilities receiving state funds are mandated to report sociodemographic information on all substance abuse treatment admissions, including the substance being abused. These data offer another way to indirectly measure the prevalence of injection drug use in Vermont. However, the admissions data may not represent unduplicated individuals, but rather they may represent multiple admissions within a calendar year for an individual.

Population Data

U.S. Bureau of the Census (Census Data)

The Census Bureau collects data on demographic characteristics of the U.S. population, family structure, educational attainment, income level, housing status, and the percentage of persons who live at or below the federal poverty level. Vermont-specific data from the 2000 Census were accessed at the Census Bureau's web site (www.census.gov).

Ryan White CARE Act Data

In 2002 the HIV/AIDS Program established a standardized unique identifier reporting system with the six state- and federally-funded AIDS Service Organizations and the Comprehensive Care Clinics in order to reduce duplication of services and to determine the number of persons receiving services from these organizations.

The HIV/AIDS Program reports on HIV-positive client utilization of Ryan White Title II services by service category. The data include service utilization at the above mentioned agencies for the first quarter of fiscal year 2002, but represent individuals who receive services on an ongoing basis. The data include individuals who are HIV-positive, as well as individuals who are not infected but who are directly impacted by immediate family members living with the virus. Unique identifiers are not reported for HIV-negative individuals.

The HIV/AIDS Program also uses unique identifiers reported to the Title II Coordinator to determine the number of individuals receiving case management services, where these services are received, and the percentage of duplication of services occurring across agencies. Due to the extensive reporting required by the Health Resources and Services Administration (i.e., the Care Act Data Report), unique identifier data are reported twice a year. Supplemental data is collected from the Dartmouth Hitchcock Medical Center to obtain demographic information on Vermont residents receiving medical services at that out-of-state facility.

GIS Data

The Vermont Department of Health utilizes ESRI ArcView/ArcGIS mapping software. The Vermont Center for Geographic Information is the state data warehouse and source for most of the base data used to produce the maps used in the Epidemiologic Profile.